Consolidated Irrigation District

Adams and Academy Basin Project

Draft Initial Study/ Mitigated Negative Declaration

June 2019

Prepared for:
Phil Desatoff
Consolidated Irrigation District

Prepared by Consolidated Irrigation District with assistance from:

Prepared by:
Provost & Pritchard Consulting Group
286 W. Cromwell Ave. Fresno, California 93711

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

Lead Agency:

Consolidated Irrigation District
2255 Chandler Street
P.O. Box 209
Selma, CA 93662

Report Prepared for:

Consolidated Irrigation District
2255 Chandler Street
Selma, CA 93662

Contact:
Phil Desatoff
(559) 896-1660

Report Prepared by:

Provost & Pritchard Consulting Group

Briza Sholars, Senior Planner, Project Manager, QA/QC
Brooke Fletcher, Biologist/ Assistant Planner
Trevor Stearns, GIS/ Assistant Planner
Jackie Lancaster, Administrative Support

Contact:
Briza Sholars
(559) 449-2700

Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

AB ..... Assembly Bill
CAA ..... Clean Air Act
CalEEMod ..... California Emissions Estimator Model
CalEPA ..... California Environmental Protection Agency
Cal/OSHA ..... California Division of Occupational Safety and Health
Caltrans ..... California Department of Transportation
CARB ..... California Air Resources Board
CAAQS ..... California Ambient Air Quality Standards
CCAA ..... California Clean Air Act
CCR ..... California Code of Regulations
CID ..... Consolidated Irrigation District
CDFW ..... California Department of Fish and Wildlife
CEC ..... California Energy Commission
CEQA ..... California Environmental Quality Act
CH_4 ..... Methane
CNDDB ..... California Department of Fish and Wildlife Natural Diversity Database
CO ..... Carbon Monoxide
CO_2e ..... Carbon Dioxide Equivalent
District ..... Consolidated Irrigation District
DPM ..... Diesel Particulate Matter
DTSC ..... Department of Toxic Substance Control
DWR ..... Department of Water Resources
EIR ..... Environmental Impact Report
EPA ..... U.S. Environmental Protection Agency
FEMA ..... Federal Emergency Management Agency
FMMP ..... Farmland Mapping and Monitoring Program
GC ..... Government Code
GHG ..... Greenhouse Gas
GIS ..... Geographic Information System
IS ..... Initial Study
IS/MND ..... Initial Study/Mitigated Negative Declaration
MMRP ..... Mitigation Monitoring & Reporting Program

MND ..... Mitigated Negative Declaration
MT CO_2e ..... Metric Tons of Carbon Dioxide Equivalent
NAAQS ..... National Ambient Air Quality Standards
ND ..... Negative Declaration
NO_2 ..... Nitrogen Dioxide
NOX ..... Nitrogen Oxide
NPDES ..... National Pollutant Discharge Elimination System
NRCS ..... Natural Resources Conservation Service
O_3 ..... Ozone
Pb ..... Lead
PM_{10} ..... Particulate Matter less than 10 microns in diameter
Project ..... Adams and Academy Basin
SHC ..... Streets and Highways Code
SJVAB ..... San Joaquin Valley Air Basin
SJVAPCD ..... San Joaquin Valley Air Pollution Control District
SO_2 ..... Sulfur Dioxide
SWRCB ..... State Water Resources Control Board
SWPPP ..... Storm Water Pollution Prevention Plan
TAC ..... Toxic Air Contaminants
TPY ..... Tons Per Year
USDA ..... U. S. Department of Agriculture
USGS ..... U. S. Geological Survey

1 Introduction

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of Consolidated Irrigation District (CID or District) to address the environmental effects of the Adams and Academy Basin Project (Project or proposed Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et.seq*. The District is the CEQA lead agency for this proposed Project.

The site and the proposed Project are described in detail in the **Project Description, Chapter 2**.

1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq*.)-- also known as the CEQA Guidelines-- Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is ***no*** substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or *mitigated* ND shall be prepared for a project subject to CEQA when either:

a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or

b. The IS identified potentially significant effects, but:

    1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and

    2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project *as revised* may have a significant effect on the environment.

1.2 Document Format

This IS/MND contains six chapters and four appendices**. Chapter 1, Introduction**, provides an overview of the proposed Project and the CEQA process. **Chapter 2, Project Description**, provides a detailed description of proposed Project components and objectives. **Chapter 3, Impact Analysis**, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. **Chapter 4, Mitigation Monitoring and**

Reporting Program (MMRP), provides the proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation. **Chapter 5** is **References**, and **Chapter 6** is the **List of Preparers**.

The CalEEMod Output Files, Biological Survey Results Memo, Cultural Resources Information, and NRCS Soil Resource Report are provided as technical **Appendix A**, **Appendix B**, **Appendix C** and **Appendix D**, respectively, at the end of this document.

The analyses of environmental impacts in **Chapter 3** are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less Than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2 Project Description

2.1 Project Background and Objectives

2.1.1 Project Title

Consolidated Irrigation District Adams and Academy Basin Project

2.1.2 Lead Agency Name and Address

Consolidated Irrigation District
2255 Chandler Street
P.O. Box 209
Selma, CA 93662

2.1.3 Contact Person and Phone Number

Lead Agency Contact
Phil Desatoff
Consolidated Irrigation District
P.O. Box 209
2255 Chandler Street
Selma, CA 93662
(559) 896-1660

CEQA Consultant
Provost & Pritchard Consulting Group
Briza Sholars, Environmental Project Manager
(559) 449-2700

2.1.4 Project Location

The Project is located in south-central portion of Fresno County, central California, approximately 166 miles southeast of Sacramento and 90 miles northwest of Bakersfield (see **Figure 2-1).** The proposed project site for the Adams and Academy Basin is located approximately 7.4 miles east of State Route 99 and more specifically, on the southwestern corner of Adams and Academy Avenues on Assessor's Parcel Numbers 353-030-64ST, 65ST, 058S, 07T, 06T. See **Figure 2-3.**

2.1.5 Latitude and Longitude

The centroid of the Project area is 36.632392, -119.559784

2.1.6 General Plan Designation

The General Plan Land Use Designation is Agriculture.

2.1.7 Zoning

The Zoning designation is AE-20 (Exclusive Agriculture, 20-Acre Minimum)

2.1.8 Description of Project

2.1.8.1 District Background

Consolidated Irrigation District (CID) is a 145,000 acre agricultural irrigation district headquartered in the City of Selma. CID is a conjunctive use District that delivers surface water supplies to its customers and its groundwater recharge ponds. The District has water rights to the Kings River. CID lies in the southeast portion of the Kings subbasin, which extends from the Sierra Nevada foothills on the east to the San Joaquin Valley trough on the west, and from the San Joaquin River on the north to roughly the Fresno County line on the south. The Kings Basin has been identified as critically over-drafted, with an average of about 1,200 feet below ground surface as its maximum effective depth of the basin in terms of pumping and recharge.

CID's normal irrigation delivery season typically goes from May to July for the 95,000 acres of land receiving CID surface water supplies.

2.1.8.2 Project Description

This project would reduce groundwater overdraft within CID by constructing a groundwater banking project located near the intersection of Adams and Academy Ave between Sanger and Parlier. The site is approximately 60 acres and is in immediate proximity of two surface water supply canals operated by CID, the Mill Ditch and the Kingsburg Branch. The project would require a turnout structure, a sedimentation channel, recharge basins and a distribution structure to convey water to the basin. Monitoring wells would be established to monitor water levels near the project. A recovery well would be constructed to extract water that has been stored by the project.

The proposed Project would divert water, primarily from the Kings River, in wet years and recharge the aquifer, then be available for later use by groundwater pumping. The banked water would later be pumped out using new recovery wells to meet existing irrigation demands during the irrigation season when limited surface water is available, especially during times of a drought.

2.1.8.1 Construction, Operation and Maintenance

Construction of the Project is anticipated to be completed within one year. The project would include approximately 60 acres of recharge basins including onsite piping and appurtenances to divert water from existing District facilities into the proposed recharge basins. The Project includes mobilization, site preparation, berm construction no greater than six feet in external height surrounding the basin; earthwork and structures replacement; Project turnout, sedimentation weir, and interbasin structures. The Project may include ponds/cells within the basin separated by levees. After construction completion, performance testing and demobilization would occur.

Construction equipment would likely include a drilling rig, excavators, backhoes, graders, skid steers, loaders, and hauling trucks.

Generally, construction would occur between the hours of 7am and 5pm, Monday through Friday, excluding holidays. Post-construction activities would include system testing, commissioning, and site clean-up. Construction would require temporary staging and storage of materials and equipment. Staging areas would be located onsite.

Although construction is not expected to generate hazardous waste, field equipment used during construction has the potential to contain various hazardous materials such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products.

Operation and maintenance of the basin would be performed by CID's existing maintenance staff.

2.1.9 Surrounding Land Uses and Setting

The Project site is surrounded by agricultural lands, most of which is currently in production. Directly west of the well site is Mill Ditch. North of the Project is E. Adams Avenue. East of the Project is S. Academy Avenue. Residential development is sparse and associated with agriculture uses.

The entire basin being proposed is located on five parcels approximately 60-acres total. The Project site is zoned as AE-20 (Exclusive Agriculture, 20-Acre Minimum) and designated Agriculture by the Fresno General Plan. Neighboring properties are also designated Agriculture. The Project is on the southwest corner of E. Adams Avenue and S. Academy Avenue which are both considered collector streets.

2.1.10 Other Public Agencies Whose Approval May Be Required

Permits that may be required:

- State Water Resources Control Board – NPDES Construction General Permit
- San Joaquin Valley Air Pollution Control District – Rules and Regulations (Regulation VIII, Rule 9510, Rule 4641)

2.1.11 Consultation with California Native American Tribes

Assembly Bill 52 (AB 52; codified at Public Resources Code Section 21080.3.1, *et seq.*) requires that a lead agency, within 14 days of determining that it would undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement would be made.

The District has not received any written correspondence from a Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of proposed projects. All Tribal correspondence is discussed in further detail in sections 3.5 and 3.18 of Chapter 3.

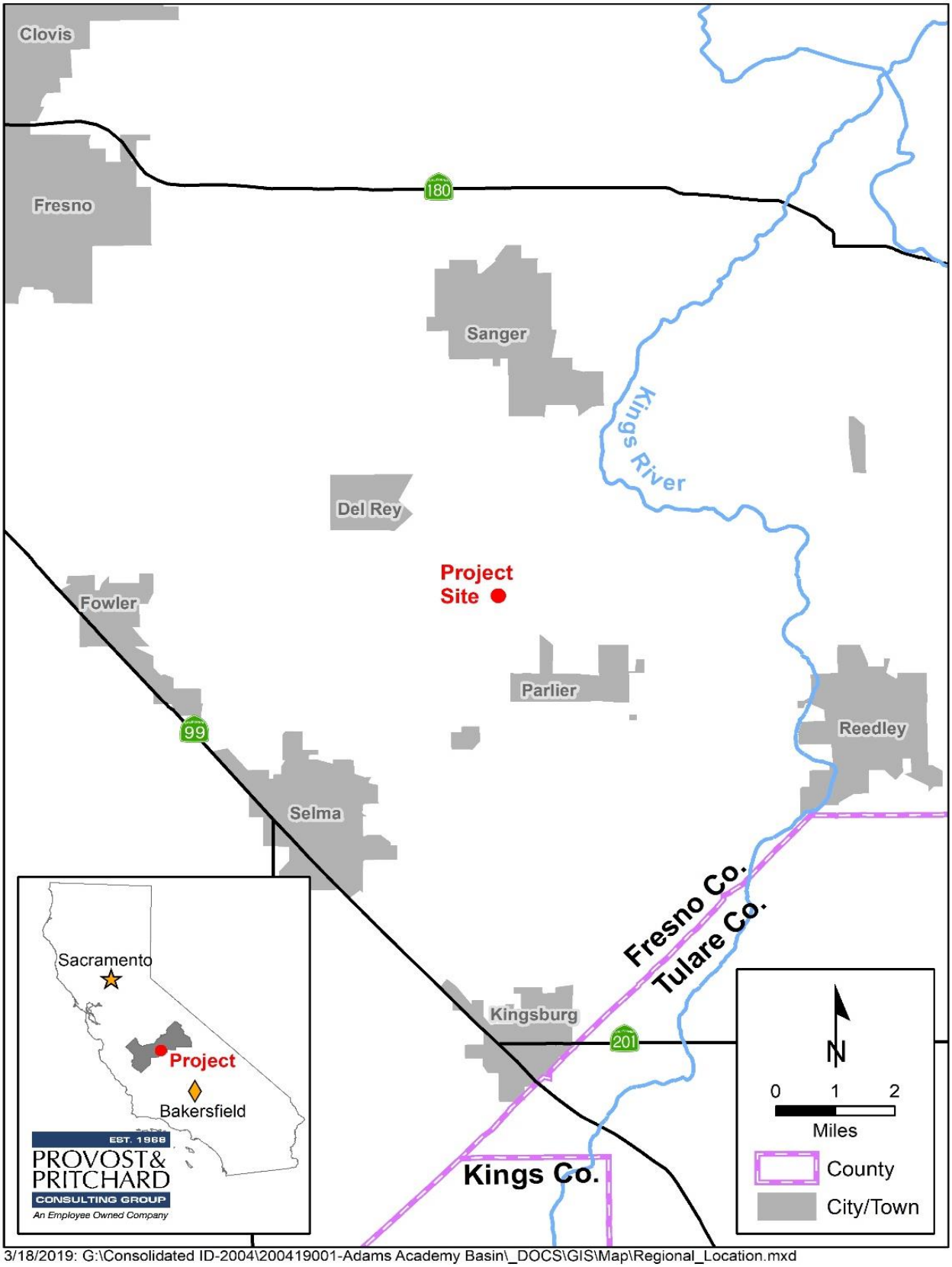


Figure 2-1. Regional Vicinity Map

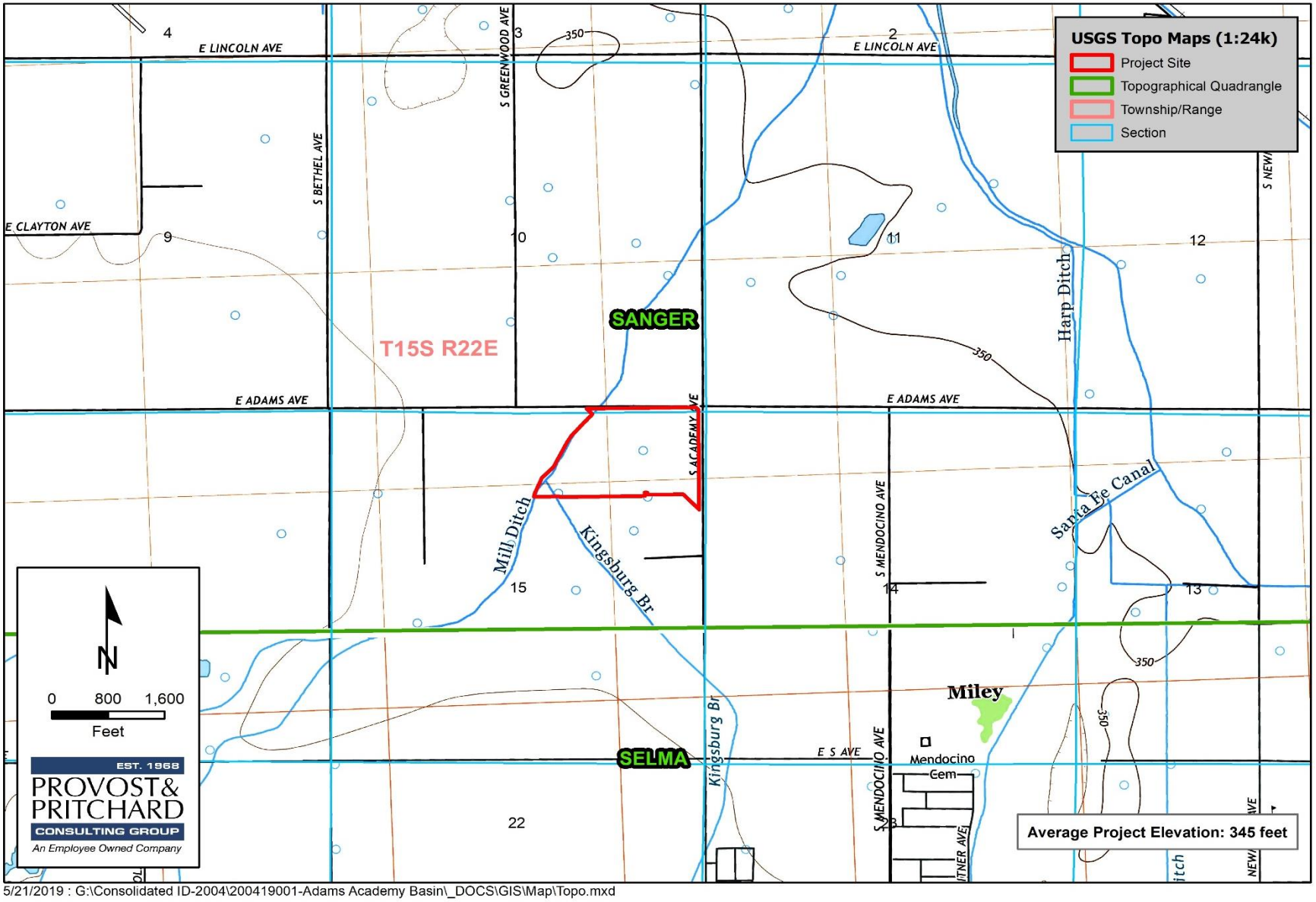
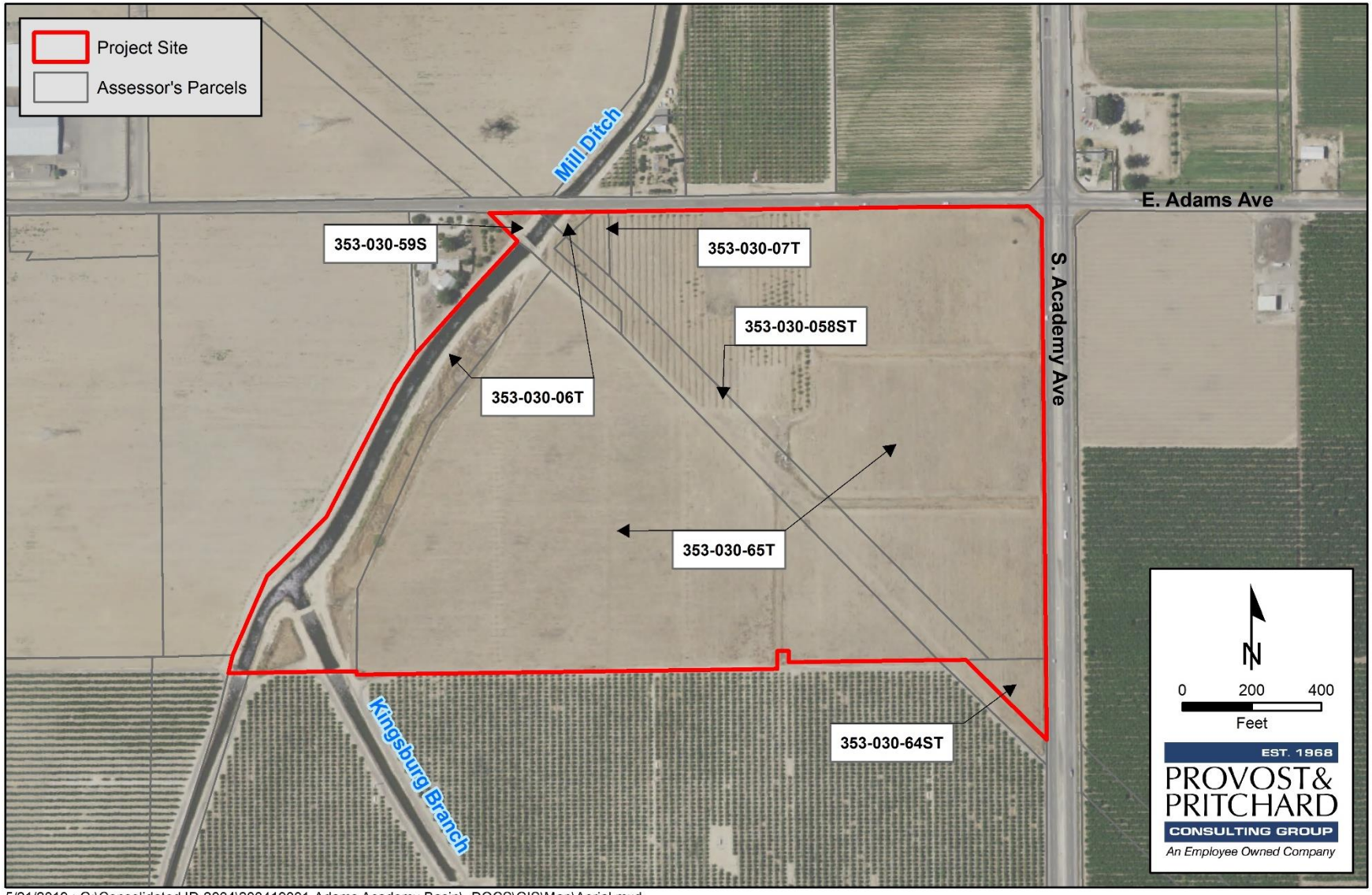


Figure 2-2. Topographic Quadrangle Map



5/21/2019 : G:\Consolidated ID-2004\200419001-Adams Academy Basin_DOCS\GIS\Map\Aerial.mxd

Figure 2-3. Area of Potential Effect.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and subsequent discussion on the following pages.

☐ Aesthetics	☒ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☒ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation/Traffic	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Phillip G. Desatoff — Signature

5/30/19 — Date

Phillip G. Desatoff General Manager — Printed Name/Position

3 Impact Analysis

3.1 Aesthetics

Table 3-1. Aesthetics Impacts

Aesthetics				
Except as provided in Public Resources Code Section 21099, would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Environmental Setting

The Project is located in the south-central portion of Fresno County in the Central San Joaquin Valley. Lands in the vicinity consist of relatively flat irrigated farmlands and the rural residences. Agricultural practices in the vicinity consist of row crop and orchard cultivation. In Fresno County, a portion of State Route 180 (SR 180) has been officially identified by Caltrans as a "designated State Scenic Highway;" however, that segment is approximately 10 miles northeast of the site. The Project site is located approximately 47 miles east of the Coastal Range and approximately 14 miles west of the foothills of the Sierra Nevada. Neither of these foothills or mountain ranges are typically visible from the vantage point of the Project site. Rural roadways and local water distribution canals are in the immediate vicinity. The proposed Project would be consistent with the aesthetics of the area.

3.1.1.1 Local

Fresno County General Plan[1]: The Fresno County General Plan sets forth the following goals and policies that protect the aesthetic character of the County and which have potential relevance to the Project's CEQA review:

Goal OS-K: To conserve, protect, and maintain the scenic quality of Fresno County and discourage development that degrades areas of scenic quality.

[1] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

Policy HS-E.2: The County shall ensure that new development, including public infrastructure projects, does not create safety hazards such as glare from direct or reflective sources.

3.1.2 Impact Assessment

I-a) Have a substantial adverse effect on a scenic vista?

a) Less Than Significant Impact. The primary scenic vista in the region is the Sierra Nevada foothills to the east. The Project would not interfere with public views of the Sierra Nevada foothills during construction or operation as all Project related activity would be restricted to the Project site (**Figure 2-1**) Furthermore, the Project site does not stand out from its surroundings in any remarkable fashion. Impacts would be less than significant.

I-b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

b) No Impact. The Scenic Highway Program[2] was created to preserve and protect scenic highway corridors from change would diminish the aesthetic value of lands adjacent to highways. A highway may be officially designated "scenic" depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

In Fresno County, a 24-mile segment of State Route 180 located in southeastern Fresno County has been officially identified by Caltrans as "designated State Scenic Highway". However, the Project site is located approximately ten miles southwest and Project activities would not have the potential to affect the scenic highway. There would be no impact.

I-c) Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

c) Less Than Significant Impact. The Project site is primarily surrounded by agricultural uses and water infrastructure in a non-urbanized setting. The current visual character of the Project site is vacant land and the implementation of the basin Project would not substantially affect the visual characteristics of the area. Additionally, the Project does not conflict with the onsite zoning designation. Impacts would be less than significant.

I-d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

d) Less Than Significant Impact. The Project area is primarily surrounded by agriculture and rural residential uses, and water infrastructure. Lighting impacts would be negligible because construction would be required to occur during the hours of 6:00 am to 9:00 pm on any day except Saturday or Sunday or before 7:00 am to 5:00 pm on Saturday and Sunday.[3] Furthermore, if lighting were to occur, it would be directed downward and hooded to minimize light and glare on adjacent properties and roadways. Additional vehicular traffic after construction would be limited to operation and maintenance on an as-needed basis which would be performed during daylight hours, except in an unforeseen emergency situation. Therefore, the Project

[2] State Scenic Highways https://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=SHC&division=1.&title=&part=&chapter=&article= Accessed March 18, 2019.
[3] Fresno County Municipal Code https://library.municode.com/ca/fresno_county/codes/code_of_ordinances?nodeId=TIT8HESA_CH8.40NOCO Accessed March 21, 2019

would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area or be inconsistent with existing conditions

3.2 Agriculture and Forestry Resources

Table 3-2. Agriculture and Forestry Resources Impacts

Agriculture and Forest Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Environmental Setting

The Project is located in the California's Central San Joaquin Valley. Specifically, within an unincorporated area in Fresno County. Fresno County is located within California's agricultural heartland. For crop year 2016-2017, Fresno County ranked third for the top agricultural counties in the State in the annual market value of farm products.[4]

A wide range of commodities are grown in the county, with major production of milk, poultry, livestock, and other animal commodities, row crops, nuts and fruit tree crops, and vegetables. Rich soil, irrigation water, Mediterranean climate and steady access to local, national and global markets make this possible.

Fresno County General Plan[5]: The Fresno County General Plan sets forth the following goals and policies that protect the Agriculture and Forestry Resources character of the County and which have potential relevance to the Project's CEQA review:

[4] USDA. California County Agricultural Commissioners' Reports 2016-2017. https://www.nass.usda.gov/Statistics_by_State/California/Publications/AgComm/2017/2017cropyearcactb00.pdf Accessed March 21, 2019
[5] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

Policy LU-A.1: The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.

Policy LU-A.20: The County shall adopt and support policies and programs that seek to protect and enhance surface water and groundwater resources critical to agriculture.

Policy PF-C.11: The County shall assure an on-going water supply to help sustain agriculture and accommodate future growth by allocation of resources necessary to carry out the water resource management programs.

3.2.2 Impact Assessment

II-a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

a) Less Than Significant Impact. The Farmland Mapping and Monitoring Program produces maps and statistical data used for analyzing impacts to California's agriculture resources. These maps are updated on a biennial basis with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. The farmland maps identify eight land use categories, five of which are agriculture related: prime agriculture, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. The land use categories onsite and in the proximity of the Project are summarized below:

- *PRIME FARMLAND (P): Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.*
- *FARMLAND OF STATEWIDE IMPORTANCE (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.*
- *FARMLAND OF LOCAL IMPORTANCE (L): Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.*

As demonstrated in **Figure 3-1**, the FMMP for Fresno County designates the site of the Project as Farmland of Local Importance. Although the Project site is designated as farmland, the land is not being used for agricultural purposes and has not been in agricultural production for approximately four years. Implementation of the basin project would help meet existing agriculture irrigation demands during the irrigation season when limited surface water is available, especially during times of a drought. Properties north of the Project are considered Prime Farmland and Farmland of State Importance. East of the Project is considered Prime Farmland. South is considered Farmland of Local Importance, Prime Farmland, and Farmland of State Importance. Lastly, West of the Project is considered Farmland of Local Importance and Prime Farmland (See **Figure 3-1**). The site has been zoned AE-20 (Exclusive Agriculture, 20-acre minimum) and designated for Agriculture uses by the Fresno County General Plan. Implementation of the Project would also increase the amount groundwater recharge for the underlying aquifer near the City of Parlier, a Disadvantaged Community that relies solely on groundwater. The impact would be less than significant.

II-b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

b) Less Than Significant Impact. The Project site is zoned AE-20 (Exclusive Agriculture, 20-acre minimum). The Project consists of six parcels, totaling to approximately 60 acres. None of the six parcels are

under Williamson Act contract. The nearest parcels covered under a Williamson Act contract is located across E. Adams Avenue northwest of the Project and across S. Academy Avenue east of the Project. The Project involves the construction of groundwater basins. Water basins are consistent with Agricultural zoning. Implementation of the Project would not result in a conflict with existing zoning for the AE-20 zone district or with a Williamson Act contract. Impacts would be less than significant.

II-c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

II-d) Result in the loss of forest land or conversion of forest land to non-forest use?

c and d) No Impact. There are no forest lands or timberlands within the Project site or vicinity. There would be no impact.

II-e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

e) No Impact. The Project involves the development of approximately 60-acres of groundwater basins, among related infrastructure, on six vacant parcels. The Project would not result in land use conversion of farmland or forest land, either directly or indirectly. There would be no impact.

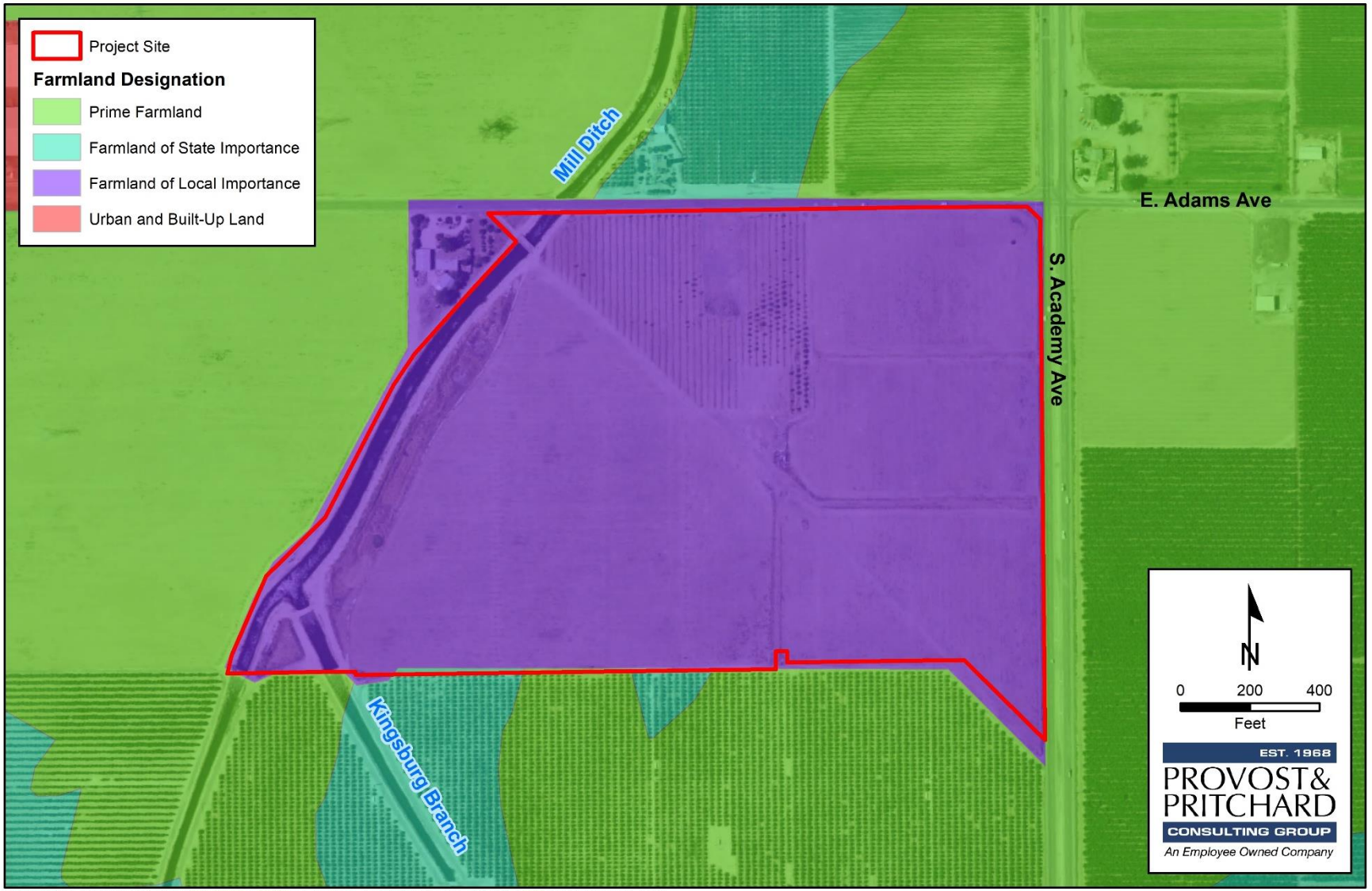


Figure 3-1. Farmland Designation Map

3.3 Air Quality

Table 3-3. Air Quality Impacts

Air Quality					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:		**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☒	☐

3.3.1 Environmental Setting

The Project lies within the eight-county San Joaquin Valley Air Basin (SJVAB), which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). Air quality in the SJVAB is influenced by a variety of factors, including topography, local and regional meteorology. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates (SO_4), hydrogen sulfide (H_2S), vinyl chloride (C_2H_3Cl) and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all State and Federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either "attainment", "nonattainment", or "extreme nonattainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal nonattainment area for O_3, a State and Federal nonattainment area for $PM_{2.5}$, a State nonattainment area for PM_{10}, a Federal and State attainment area for CO, SO_2, and NO_2, and a State attainment area for sulfates, vinyl chloride and Pb[6].

3.3.2 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report (**Appendix A**) was prepared using CalEEmod, Version 2016.3.2 for the Project in April, 2019. The sections below detail the methodology of the air quality and greenhouse gas emissions report and its conclusions.

[6] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards and Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm.

3.3.2.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated using CalEEmod, Version 2016.3.2. The emissions modeling includes emissions generated by off-road equipment and worker commute trips. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the Project applicant. All remaining assumptions were based on the default parameters contained in the model. Localized air quality impacts associated with the Project would be minor and were qualitatively assessed. Modeling assumptions and output files are included in **Appendix A**.

3.3.2.2 Long-Term Operational Emissions

Long-term operational emissions associated with the Project are estimated to be minimal in nature. Maintenance would be provided on an as needed basis by CID staff, and the operational equipment, such as an electric powered recovery well, would result in negligible emissions. The Project does not propose the use of any diesel-powered equipment. Modeling assumptions and output files are included in **Appendix A**.

3.3.2.3 Thresholds of Significance

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guide for Assessing and Mitigating Air Quality Impacts*. This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

Short-Term Emissions of Particulate Matter (PM_{10}): Construction impacts associated with the proposed Project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 15 tons per year (TPY).

Short-Term Emissions of Ozone Precursors (ROG and NOx): Construction impacts associated with the proposed Project would be considered significant if the project generates emissions of Reactive Organic Gases (ROG) or NO_X that exceeds 10 TPY.

Long-Term Emissions of Particulate Matter (PM10): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of PM_{10} that exceed 15 TPY.

Long-Term Emissions of Ozone Precursors (ROG and NOx): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of ROG or NO_X that exceeds 10 TPY.

Conflict with or Obstruct Implementation of Applicable Air Quality Plan: Due to the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} would exceed the SJVAPCD's significance thresholds, then the project would be considered to conflict with the attainment plans. In addition, if the project would result in a change in land use and corresponding increases in vehicle miles traveled, the project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Local Mobile-Source CO Concentrations: Local mobile source impacts associated with the Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e. 9.0 ppm for 8 hours or 20 ppm for 1 hour).

Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.

Odor impacts associated with the Project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

Table 3-4. Summary of Ambient Air Quality Standards and Attainment Designation

Summary of Ambient Air Quality Standards & Attainment Designation					
Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.070 ppm	Nonattainment (Extreme)**
Particulate Matter (PM_{10})	AAM	20 µg/m³	Nonattainment	–	Attainment
	24-hour	50 µg/m³		150 µg/m³	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m³	Nonattainment	12 µg/m³	Nonattainment
	24-hour	No Standard		35 µg/m³	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m³	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		-	
	Rolling 3-Month Average	–		0.15 µg/m³	
Sulfates (SO_4)	24-hour	25 µg/m³	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m³)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24-hour	0.01 ppm (26 µg/m³)	Attainment		

Summary of Ambient Air Quality Standards & Attainment Designation					
Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

** For more information on standards visit: http//www.arb.ca.gov.research/aaqs/aaqs2.pdf*
*** No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard May 5, 2010.*
****Secondary Standard*
Source: CARB 2016; SJVAPCD 2016

3.3.2.4 Local

Fresno County General Plan[7]: The Fresno County General Plan sets forth the following goals and policies regarding air quality and which have potential relevance to the Project's CEQA review:

Goal OS-G: To improve air quality and minimize the adverse effects of air pollution in Fresno County.

Policy OS-G.2: The County shall ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. The County shall require projects to comply with the County's adopted air quality impact assessment and mitigation procedures.

Policy OS-G.4: The County shall consult with the [SJVAPCD] during CEQA review for projects that require air quality impact analysis and ensure that the [SJVAPCD] is on the distribution list for all CEQA documents.

Policy OS-G.13: The County shall include fugitive dust control measures as a requirement for subdivision maps, site plans, and grading permits. This would assist in implementing the [SJVAPCD]'s particulate matter of less than ten (10) microns (PM_{10}) regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.

San Joaquin Valley Air Pollution Control District: The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the SJVAB, within which the proposed Project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the CAA and the CCAA.

The SJVAPCD Rules and Regulations that are applicable to the proposed Project include, but are not limited to, the following:

Regulation VIII (Fugitive Dust Prohibitions), Regulation VIII (Rules 8011-8081): This regulation is a series of rules designed to reduce particulate emissions generated by human activity, including construction and demolition activities, carryout and trackout, paved and unpaved roads, bulk material handling and storage,

[7] Fresno County General Plan. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps Accessed April 19, 2019.

unpaved vehicle/traffic areas, open space areas, etc. If a non-residential area is 5.0 or more acres in area, a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021. Additional requirements may apply, depending on total area of disturbance.

San Joaquin Valley Air Pollution Control District Thresholds of Significance. Projects that produce emissions that exceed the following thresholds shall be considered significant for a project level and/or cumulatively considerable impact to air quality. The following thresholds are defined for purposes of determining cumulative effects as the baseline for "considerable". Projects located within the SJVAPCD would be subject to the significance thresholds identified in section 3.3.2.3 above.

3.3.3 Impact Assessment

III-a) Conflict with or obstruct implementation of the applicable air quality plan?

a) No Impact. As noted in Impact Assessments III-b and III-c below, implementation of the Project would not result in short-term or long-term increases in emissions that would exceed applicable thresholds of significance. Projects that do not exceed the recommended thresholds would not be considered to conflict with or obstruct the implementation of applicable air quality plans.

III-b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

b) Less Than Significant Impact.

Short-Term Construction-Generated Emissions

Construction-generated emissions are temporary in duration, lasting approximately 12 months for site preparation and construction of the Project. Project development includes mobilization, site preparation, berm construction surrounding the basin, earthwork, structures replacement, and development of a sedimentation channel, interbasin structures, and other associated infrastructure. The construction of the Project would result in the temporary generation of emissions associated with site grading and excavation, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces.

Estimated construction-generated emissions and operational emissions are summarized in **Table 3-5** and **Table 3-6**, respectively.

Table 3-5. Unmitigated Short-Term Construction-Generated Emissions of Criteria Air Pollutants

Short-Term Construction-Generated Emissions of Criteria Air Pollutants					
	Annual Emissions (Tons/Year) (1)				
Source	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
2019	0.1183	1.1824	0.7434	0.0632	0.0562
2020	0.4014	4.2564	2.5281	1.2713	0.7556
Maximum Annual Proposed Project Emissions:	0.4014	4.2564	2.5281	1.2713	0.7566
SJVAPCD Significance Thresholds:	*10*	*10*	*100*	*15*	*15*
Exceed SJVAPCD Thresholds?	*No*	*No*	*No*	*No*	*No*

1. *Emissions were quantified using CalEEmod Output Files Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*

Table 3-6. Unmitigated Long-Term Operational Emissions

Long-Term Operational Emissions of Criteria Air Pollutants					
	Annual Emissions (Tons/Year) (1)				
Source	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Annual Project Emissions:	0.2235	0.00001	0.00055	0.0	0.0
SJVAPCD Significance Thresholds:	*10*	*10*	*100*	*15*	*15*
Exceed SJVAPCD Thresholds?	*No*	*No*	*No*	*No*	*No*

1. *Emissions were quantified using CalEEmod Output Files Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*

It is important to note that the Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions). Mandatory compliance with SJVAPCD Regulation VIII would further reduce emissions of fugitive dust from the Project site, and adequately minimize the Project's potential to adversely affect nearby sensitive receptors to localized PM impacts.

Given that project-generated emissions would not exceed applicable SJVAPCD significance thresholds and the proposed Project would be required to comply with SJVAPCD Regulation VIII, construction-generated emissions of criteria pollutants would be considered less than significant.

Long-Term Operational Emissions

Long-term operational emissions associated with the Project would be minimal. Maintenance would be provided on an as needed basis and the operational equipment, such as the use of a stationary electric well, would result in negligible emissions. Therefore, Project-related impacts to air quality would be considered less than significant.

III-c) Expose sensitive receptors to substantial pollutant concentrations?

c) Less Than Significant Impact.

Toxic Air Contaminants

Implementation of the Project would not result in the long-term operation of any major onsite stationary sources of TACs, nor would Project implementation result in a substantial increase in vehicle trips along area roadways, in comparison to existing conditions. However, construction of the Project may result in temporary increases in emissions of diesel-exhaust particulate matter (DPM) associated with the use of off-road diesel equipment. More than 90% of DPM is less than one µm in diameter, and thus is a subset of $PM_{2.5}$.[8] Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure of to TACs are typically calculated based on a long-term (e.g., 70-year) period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic. Construction activities would occur over an approximate 12-month period, which would constitute approximately 1 percent of the typical 70-year exposure period. As a result, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e. incremental increase in cancer risk of 10 in one million).

The Project is located in the unincorporated area of Fresno County. Nearby land uses primarily consist of agriculture with sparse residential development. Construction of the Project is not anticipated to result in a

[8] CARB. Inhalable Particulate Matter. https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm Accessed April 19, 2019.

substantial increase in DPM or other TACs. As indicated in **Table 3-5**, construction of the Project would generate maximum unmitigated annual emissions of approximately 0.7566 tons/year of $PM_{2.5,}$ which includes DPM. Operational impacts would be negligible due to the lack of combustible engines associated with the operational of the Project. Operation of the Project would generate maximum unmitigated annual emissions of approximately 0.0 tons/year of $PM_{2.5}$, as illustrated in **Table 3-6**. Project-related impacts to sensitive receptors would be less than significant.

Naturally Occurring Asbestos

Naturally-occurring asbestos, which was identified by CARB as a TAC in 1986, is located in many parts of California and is commonly associated with ultramafic rock. The Project site is not located near any areas that are likely to contain ultramafic rock[9]. As a result, risk of exposure to asbestos during the construction process would be considered less than significant.

Fugitive Dust

Construction of the Project would include ground-disturbing activities which could result in increased emissions of airborne particulate matter. The Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions). Mandatory compliance with SJVAPCD Regulation VIII would reduce emissions of fugitive dust from the Project site.

The Project is located within the unincorporated Fresno County. Construction of the Project is not anticipated to result in a substantial increase in particulate matter. As indicated in **Table 3-5** and **Table 3-6**, respectively, construction of the Project would generate maximum unmitigated annual emissions of approximately 1.2713 tons/year of PM_{10}, while operation of the Project would generate maximum unmitigated annual emissions of approximately 0.0 tons/year of PM_{10}, both of which are substantially less than SJVAPCD's threshold of significance of 15 tons/year. Project-related impacts to sensitive receptors would be less than significant.

III-d) Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

d) Less Than Significant Impact. Implementation of the Project would not result in long-term emissions of odors. However, construction would involve the use of a variety of gasoline- or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel exhaust, may be considered objectionable by some people. The Project is located within an area dominated by agricultural production, which includes the use of diesel-powered equipment and various odorous chemicals on a regular basis. Construction activities would be short-term in nature. Conditions created by Project-related activities would not vary substantially from the baseline conditions routinely experienced onsite and in the vicinity. Impacts would be less than significant.

[9] Van Gosen, B.S. and J.P. Clinkenbeard. 2011. Report Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California – California Geological Survey map Sheet 59. United States Geological Survey.

3.4 Biological Resources

Table 3-7. Biological Resources Impacts

Biological Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

3.4.1 Environmental Setting

The project area is located near the western margin of the San Joaquin Valley in a region dominated by agricultural uses. The San Joaquin Valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north. The project area is situated within a matrix of intensive agricultural uses including row and field crops, fallow fields, orchards, and vineyards.

The project area consists of dirt roads, disturbed roadside surroundings, agricultural lands, and irrigation infrastructure. The topography of the project area is relatively flat with an elevation of approximately 345 feet National Geodetic Vertical Datum (NGVD).

The biotic habitats/land uses in and around the project area consist of: orchard/vineyard, agricultural field, ruderal, agricultural basin, and canal. Images of the proposed Project area and Mill Ditch Canal can be seen in **Figure 3-2** and **Figure 3-3** below.

Figure 3-2. Project Area

Figure 3-3. Mill Ditch Canal

3.4.2 Methodology

On April 5, 2019 Provost & Pritchard conducted a biological reconnaissance survey and habitat assessment of the Adams and Academy Basin Project site. The findings were rather unremarkable and therefore would be summarized briefly below:

The Project site is classified as ruderal due to a high level of current and ongoing ground disturbance activities involving heavy equipment. The majority of the site was barren and mechanically graded at the time of the field survey. Piles of excavated dirt were present. The slightly-less-disturbed perimeter of the site contained common weedy vegetation, most of which is invasive. *Amsinckia menziesii, Brassica nigra, Brassica rapa, Capsella bursa-pastoris, Bromus diandrus, Bromus madritensis, Hordeum murinum, Erdoium botrys*, and *Malva parviflora* were a few of the prevalent species observed.

The Project site is surrounded by existing paved roads, canal infrastructure, a rural home, and active farmland, predominantly in orchards. A large pack of aggressive and territorial feral dogs inhabit the site. Between the ongoing disturbance from the use of heavy equipment and the presence of feral dogs, the majority of the Project site provides essentially no value to wildlife species as habitat, foraging ground, or as a movement corridor. Ground squirrels (*Spermophilus beecheyi*) were observed along the perimeter of the site and active cliff swallow (*Petrochelidon pyrrhonota*) nests were observed on several of the structures over Mill Ditch. Cliff swallows are extremely tolerant of disturbance, and a construction-free buffer of 50 feet should be more than adequate to protect nesting colonies during nesting season (February 1 through August 31).

In addition to those already mentioned, the following disturbance-tolerant species were observed during the field survey: killdeer (*Charadrius vociferous*), mallard (*Anas platyrhynchos*), California scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), house sparrow (*Passer domesticus*), and mourning dove (*Zenaida macroura*). Suitable breeding habitat is absent, and foraging habitat is extremely sub-optimal. Therefore, these species were likely passing through the site in search of superior habitat, which is prevalent in the agricultural fields and irrigation basins in the vicinity.

The canal banks and piles of excavated dirt were inspected for burrowing owl and San Joaquin kit fox sign and suitable habitat. While canal banks and exposed pipes onsite may have once provided habitat for these species, all portions of the site are currently unsuitable for both of these species. All burrows of adequate size showed signs of recent disturbance associated with habitation of feral dogs.

The highly disturbed Project site and the continuous operation of heavy equipment would be considered baseline conditions, similar to those of surrounding lands which are intensively cultivated for agricultural production. The disturbed habitats of the Project site are unsuitable for any special status plant and/or animal species with potential to occur in the vicinity. Therefore, implementation of this Project should not result in an adverse effect to special status species or associated habitat. The only suitable nesting habitat includes the structures housing swallow nests over Mill Ditch. Potential impacts to nesting swallows can be easily mitigated by implementing a 50-foot construction-free buffer around active swallow nests during nesting season (February 1 through August 31).

3.4.2.1 Local

Fresno County General Plan[10]: The Fresno County General Plan sets forth the following policies that protect biological resources and which have potential relevance to the Project's CEQA review:

Policy OS-E.2: The County shall require adequate buffer zones between construction activities and significant wildlife resources, including both onsite habitats that are purposely avoided and significant habitats that are adjacent to the project site, in order to avoid the degradation and disruption of critical life cycle activities such as breeding and feeding. The width of the buffer zone should vary depending on the location, species, etc. A final determination shall be made based on informal consultation with the US Fish and Wildlife Service and/or the California Department of Fish and Wildlife.

Policy OS-F.4: The County shall ensure that landmark trees are preserved and protected whenever possible.

Policy OS-F.5: The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects. As part of this process, the County shall require, as part of the environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based on field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant plant resources and/or special-status plant species. Such evaluation shall consider the potential for significant impact on these resources and shall either identify feasible mitigation measures or indicate why mitigation is not feasible.

Policy OS-F.7: The County shall require developers to take into account a site's natural topography with respect to the design and siting of all physical improvements in order to minimize grading.

Policy OS-F. 8: The County should encourage landowners to maintain natural vegetation or plant suitable vegetation along fence lines, drainage and irrigation ditches, and on unused or marginal land for the benefit of wildlife

[10] Fresno County General Plan. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps Accessed 22 October 2018.

3.4.3 Impact Assessment

IV-a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

a) Less Than Significant with Mitigation Incorporated. No sensitive plant or animal species were observed during the biological survey on April 5, 2019. Typical habitat for special status species is absent, and the site is unsuitable due to frequent and ongoing ground disturbance. Nesting swallows would be avoided by implementing a 50-foot construction-free buffer during nesting season.

Mitigation Measure BIO-1 (Nesting birds)

The only suitable nesting habitat includes the structures housing swallow nests over Mill Ditch. To address potential impacts to nesting swallows, a 50-foot construction-free buffer around active swallow nests during nesting season (February 1 through August 31) shall be implemented.

IV-b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

b) No Impact. Natural water features and riparian habitat are absent from the Project area and adjacent lands. According to CNDDB, there are no recorded observations of natural communities of special concern with potential to occur within the Project area or vicinity. Additionally, no natural communities of special concern were observed during the biological survey. Therefore, implementation of the Project would have no impact on riparian habitat or any other sensitive natural communities. Mitigation measures are not warranted.

IV-c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

c) No Impact. Natural wetlands are absent from the Project area and adjacent lands. Furthermore, there is no potential for indirect downstream effects because the Project does not involve lake or streambed altering activities. Therefore, implementation of the Project would have no impact on wetlands and mitigation measures are not warranted.

IV-d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

d) Less than Significant Impact. The Project area does not contain features that would be likely to function as wildlife movement corridors. Furthermore, the Project is located in a region often disturbed by intensive agricultural cultivation practices and human disturbance which would discourage dispersal and migration. Nesting swallows would be avoided implementing a 50-foot construction-free buffer around active swallow nests during nesting season Therefore, implementation of the Project would have no impact on wildlife movement corridors, and additional mitigation is not warranted.

IV-e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

e) No Impact. The Project description is in compliance with the goals and policies set forth in the Fresno County General Plan. Project activities do not include the removal of any native trees, which are protected by any local policies or ordinances. There would be no impact.

IV-f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

f) No Impact. The Project site is not within a designated Habitat Conservation Plan, Natural Conservation Plan, or any other State or local habitat conservation plan. There would be no impact.

3.5 Cultural Resources

Table 3-8. Cultural Resources Impacts

Cultural Resources					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

The Proposed Project site lies within Fresno County, which occupies an archeologically and historically rich part of the San Joaquin Valley.

RECORDS SEARCH

On March 26, 2019, Provost & Pritchard received a records search from the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), located at California State University, Bakersfield. The records search encompassed the Project APEs as well as a 0.5-mile radius surrounding the various locations. SSJVIC staff examined site record files, maps, and other materials to identify previously recorded resources and prior surveys within the delineated area (**Appendix C, Cultural Resource Information**). Additional sources included the State Office of Historic Preservation (SHPO) Historic Properties Directory, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources.

NATIVE AMERICAN OUTREACH

In April 2019, Provost & Pritchard contacted the Native American Heritage Commission (NAHC) in Sacramento. Provost & Pritchard provided NAHC a brief description of the project and a map showing its location and requested that the NAHC perform a search of the Sacred Lands File to determine if any Native American resources have been recorded in the immediate study area. Provost & Pritchard also requested NAHC provide a current list of local Native American contacts for the Proposed Project APE. The 13 tribes identified by NAHC were contacted in writing via US mail with a letter dated March 20, 2019 informing them about the Proposed Project. Provost & Pritchard received one response- a phone call from Kenneth Woodrow, Chairperson for the Wuksache Indian Tribe/Eshom Valley Band on March 25, 2019 to request additional information about the project including location and the Record Search. Mr. Woodrow did not make any additional recommendations for consultation for the Proposed Project.

3.5.2 Impact Assessment

V-a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

V-b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

a-b) Less than Significant Impact with Mitigation Incorporated.
A records search from the California Historical Resources Information System (CHRIS) at the Southern San Joaquin Valley Information Center (SSJVIC) dated March 26, 2019 (**Appendix C**) indicated that there are no recorded cultural resources within the project area and one recorded resource within the one-half mile radius, the Centerville Kingsburg Canal. To identify any historic properties, the SSJVIC examined the current inventories of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), California Inventory of Historic Resources (CIHR), California State Historic Landmarks, and other pertinent historical data available at the SSJVIC. Although the site was previously used for agriculture, it is unknown if cultural resources are present. Therefore Mitigation Measure CUL-1 has been incorporated into the project.

Provost & Pritchard contacted the Native American Heritage Commission (NAHC) for a Sacred Lands File & Native American Contacts List which was received March 19, 2019. Following receipt of the list, Provost & Pritchard sent letters to the following Tribes via certified mail requesting consultation:

1. *Big Sandy Rancheria of Western Mono Indians, Elizabeth D. Kipp, Chairperson*
2. *Cold Springs Rancheria, Carol Bill, Chairperson*
3. *Dumna Wo-Wah Tribal Government, Robert Ledger SR, Tribal Chairperson*
4. *Dunlap Band of Mono Indians, Benjamin Chrley Jr., Tribal Chair*
5. *Dunlap Band of Mono Indians, Dick Charley, Tribal Secretary*
6. *Kings River Choinumni Farm Tribe, Stan Alec*
7. *North Fork Mono Tribe, Ron Goode, Chairperson*
8. *Santa Rosa Indian Community of the Santa Rosa Rancheria, Rueben Barrios Sr., Chairperson*
9. *Table Mountain Rancheria of California, Leanne Walker-Grant, Chairperson*
10. *Table Mountain Rancheria of California, Bob Pennell, Cultural Resources Director*
11. *Traditional Choinumni Tribe, David Alvarez, Chairperson*
12. *Traditional Choinumni Tribe, Rick Osbourne, Cultural Resources*
13. *Wuksache Indian Tribe/Eshom Valley Band, Kenneth Woodrow, Chairperson*

No written responses were received. As noted earlier, one telephone response was received from Kenneth Woodrow, Chairperson for the Wuksache Indian Tribe/Eshom Valley Band. In the telephone call to Provost & Pritchard, Mr. Woodrow asked how far the project site was from the Kings River and requested a copy of the Record Search which was emailed to him on April 1, 2019. He did not provide any recommendations or concerns regarding Proposed Project Implementation. All Tribal correspondence is included within Error! Reference source not found. to this initial study.

Although it is unlikely that archeological remains would occur during construction or operation of the Proposed Project, CUL-1 is to be considered.

Mitigation Measure CUL-1 (Archaeological Resources)
In the event that archaeological remains are encountered at any time during development or ground-moving activities within the entire project area, all work in the vicinity of the find shall halt until a qualified archaeologist can assess the discovery. The District shall implement all recommendations of the archaeologist necessary to avoid or reduce to a less than significant level potential impacts to cultural resource. Appropriate actions could include a Data Recovery Plan or preservation in place.

V-c) Disturb any human remains, including those interred outside of dedicated cemeteries?

c) Less than Significant Impact with Mitigation Incorporated. No formal cemeteries or other places of human internment are known to exist on the Project site; however, in accordance with Health and Safety Code Section 7050.5 and Public Resource Code Section 5097.98, if human remains are uncovered, Mitigation Measure CUL-2 would be implemented.

Mitigation Measure CUL-2 (Human remains)

If human remains are uncovered, or in any other case when human remains are discovered during construction, the Fresno County Coroner is to be notified to arrange their proper treatment and disposition. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC would then identify the Most Likely Descendent who would determine the manner in which the remains are treated.

3.6 Energy

Table 3-9. Energy Impacts

Energy					
	Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.6.1 Environmental Setting

PG&E is the primary energy utility purveyor within Fresno County. PG&E has sufficient energy supplies to supply the growth that has occurred in Fresno County. Much of the energy consumed in the region is for residential, commercial, and transportation purposes.

Construction equipment and construction worker vehicles operated during Project excavation and construction would use fossil fuels. This increased fuel consumption would be temporary and would cease at the end of the construction activity, and it would not have a residual requirement for additional energy input. The marginal increases in fossil fuel use resulting from Project construction are not expected to have appreciable impacts on energy resources.

3.6.1.1 Local

Fresno County General Plan[11]: The Fresno County General Plan sets forth the following goals and policies that protect the Energy services of the County and none of which have potential relevance to the Project's CEQA review:

3.6.2 Impact Assessment

VI-a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

a) No Impact. As discussed in Section 3.3, the Project would not exceed any air emission thresholds during construction or operation. The Project would comply with construction best management practices and may be required to complete a SWPPP as part of construction. Once completed, the Project would be mostly passive in nature and would not use an excessive amount of energy. Therefore, the Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.

[11] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

VI-b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

b) No Impact. The Project would be passive in nature once it is completed, and the construction phase would be temporary in nature and would not exceed any thresholds set by the SJVAPCD.

3.7 Geology and Soils

Table 3-10. Geology and Soils Impacts

Geology and Soils				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.7.1 Environmental Setting

The Project is located in the south-central region of Fresno County, in the southern section of California's Great Valley Geomorphic Province, or Central Valley. The Sacramento Valley makes up the northern third and the San Joaquin Valley makes up the southern two-thirds of the geomorphic province. Both valleys are watered by large rivers flowing west from the Sierra Nevada Range, with smaller tributaries flowing east from the Coast Ranges. Most of the surface of the Great Valley is covered by Quaternary (present day to 1.6 million years ago) alluvium. The sedimentary formations are steeply upturned along the western margin due

to the uplifted Sierra Nevada Range.[12] From the time the Valley first began to form, sediments derived from erosion of igneous and metamorphic rocks and consolidated marine sediments in the surrounding mountains have been transported into the Valley by streams.

Using the USDA NRCS soil survey of the Project site, an analysis of the soils onsite was performed (**Appendix D**). Soils in the area consist of Delhi loamy sandy 0 to 3 percent slopes, MLRA 17, Dello loamy sand, Hanford sandy loam, Hanford fine sandy loam, and Tujunga loamy sand 0 to 3 percent slopes (**Table 3-11. Soils of the Project site**).

Table 3-11. Soils of the Project site

Soils of the Study Area					
Soils Series	**Parent Material**	**Drainage Class**	**Hydric?**	**Shrink-swell Capacity**	**Acres of Project site**
Delhi loamy sand, 0 to 3 percent slopes, MLRA 17	Eolian deposits derived from sandy alluvium derived from granite	Somewhat excessively drained	No	N/A	19.7
Dello loamy sand	Alluvium derived from Granitic	Somewhat poorly drained	Yes	Flooding (1.00)/Depth to saturated zone (0.61)	1.7
Hanford sandy loam	Alluvium derived from Granite	Well drained	No	N/A	5.5
Hanford fine sandy loam	Alluvium derived from Granite	Well drained	No	N/A	15.0
Tujunga loamy sand, 0 to 3 percent slopes	Alluvium derived from Granite	Somewhat excessively drained	No	Flooding (1.00)	15.7

3.7.1.1 Faults and Seismicity

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known faults cut through the local soil at the site. The nearest major fault is the San Andreas Fault, located approximately 71 miles southwest of the Project site. The San Andreas Fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates. A smaller fault zone, the Nunez Fault is approximately 56 miles southwest of the site.

3.7.1.2 Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, depth to groundwater, and the duration and intensity of ground shaking. Although no specific liquefaction hazard areas have been identified in Fresno County, this potential is recognized

[12] Harden, D.R. 1998, California Geology, Prentice Hall, 479 pages

throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide. It is reasonable to assume that due to the depth to groundwater within the southern portion of Fresno County, liquefaction hazards would be negligible.

3.7.1.3 Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of ground water, oil, or natural gas. These areas are typically composed of open-textured soils, high in silt or clay content, that become saturated. The Project site is dominated by loamy sand and sandy loam soils, with a low to moderate risk of subsidence.

3.7.1.4 Dam and Levee Failure

Pine Flat Reservoir is located approximately 19 miles northeast, and the Project site lies within the inundation zone for Pine Flat Dam.

3.7.1.5 Local

Fresno County General Plan[13]: The Fresno County General Plan sets forth the following goals and policies relating to seismic and geologic hazards of the County and which have potential relevance to the Project's CEQA review:

OS-A.29: In areas with increased potential for groundwater degradation (e.g., areas with prime percolation capabilities, coarse soils, and/or shallow groundwater), the County shall only approve land uses with low risk of degrading groundwater

HS-D.9: The County shall seek to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where feasible, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion

3.7.2 Impact Assessment

VII-a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

VII-a-i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

VII-a-ii) Strong seismic ground shaking?

a-i and a-ii) Less Than Significant Impact. The Project site and its vicinity are located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest major fault is the San Andreas Fault, located approximately 71 miles southwest of the Project site. A smaller fault zone, the Nunez Fault is approximately 56 miles southwest of the site.

[13] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

The Project involves construction of approximately 60-acres of basins which does not include development of habitable residential, commercial or industrial structures. Operation of the Project would not require permanent staff onsite or an increase in the number of employees required for routine maintenance. Instead, routine maintenance and repairs would be performed infrequently, on an as-needed basis by current CID employees. Therefore, implementation of the Project would not result in an increase of people or habitable structures onsite. Any impact would be less than significant.

VII-a-iii) Seismic-related ground failure, including liquefaction?

a-iii) Less Than Significant Impact. Liquefaction is a process which involves the temporary transformation of soil from a solid state to a fluid form during intense and prolonged groundshaking. Water-saturated areas with shallow depth to groundwater and uniform sands, loose-to-medium in density, are prone to liquefaction. The Project site is not in a wetland area, not in an area where it is subject to 0.3g acceleration or greater or contain soils where liquefaction can occur due to coarseness or have low clay content.

VII-a-iv) Landslides?

a-iv) No Impact. As the Project is located on the Valley floor, no major geologic landforms exist on or near the site that could result in a landslide event. According to the Fresno County General Plan Background Report, the Project site is not within or near a region classified with a high landslide potential. The site is approximately 14 miles southwest of the Sierra Nevada foothills. and the local topography is essentially flat and level. There would be no impact.

VII-b) Result in substantial soil erosion or the loss of topsoil?

b) Less Than Significant Impact. Earthmoving activities associated with the Project would include excavation, grading, and infrastructure construction. These activities could expose soils to erosion processes and the extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Dischargers whose projects disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). Since the Project site has relatively flat terrain with a low potential for soil erosion and would comply with the SWRCB requirements, the impact would be less than significant.

VII-c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

VII -d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?

c and d) Less Than Significant Impact. Soils onsite consist of the soils depicted on **Table 3-11**, which are classified as somewhat excessively drained, somewhat poor drained, and well drained, all with a very low runoff class (See **Appendix D**). The Project is proposing to construct approximately 60-acres of basins to reduce groundwater overdraft. The Project site and surrounding areas do not contain substantial grade changes. Risk of landslides, lateral spreading, subsidence, liquefaction, and collapse are minimal due to the soil characteristics. The Project does not propose a significant change in the local topography that would cause sloping. The construction of the Project would involve excavating the Project site to a uniform depth. The

Project does not include the development of structures or facilities that could be affected by expansive soils or expose people to substantial risks to life or property. Furthermore, the Project would be consistent with the California Building Standards Code. Any impacts would be less than significant.

VII-e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

e) No Impact. Septic installation or alternative wastewater disposal systems are not necessary for the project. There would be no impact.

VII f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

f) Less Than Significant with Mitigation Incorporated. Paleontological resources are fossilized remains of flora and fauna and associate deposits. CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) Section 15126.4(a)(1)). PRC Section 5097.5 (see above) also applies to paleontological resources.

There are no known paleontological resources or unique geological features have been identified at the Project site. However, if a paleontological resource is found then the construction impacts can make a significant impact unless mitigated properly. The Project would be less than significant with mitigation incorporated.

Mitigation Measure – GEO - 1

> Should paleontological resources be encountered on the Project site, all ground disturbing activities in the area shall stop. A qualified paleontologist shall be contacted to assess the discovery. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, a final report. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City of Porterville for review, and (if paleontological materials are recovered) a paleontological repository, such as the University of California Museum of Paleontology.

3.8 Greenhouse Gas Emissions

Table 3-12. Greenhouse Gas Emissions Impacts

Greenhouse Gas Emissions					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.8.1 Environmental Setting

The Earth's climate has been warming for the past century. It is believed that this warming trend is related to the release of certain gases into the atmosphere. Greenhouse gases (GHG) absorb infrared energy that would otherwise escape from the Earth. As the infrared energy is absorbed, the air surrounding the Earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past two decades. The 10 warmest years of the last century all occurred within the last 15 years. It appears that the decade of the 1990s was the warmest in human history (National Oceanic and Atmospheric Administration, 2010). Human activities have been attributed to an increase in the atmospheric abundance of greenhouse gases. The following is a brief description of the most commonly recognized GHGs.

3.8.1.1 Greenhouse Gases

Commonly identified GHG emissions and sources include the following:

Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human-made for applications such as air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

3.8.1.2 Effects of Climate Change

There are uncertainties as to exactly what the climate changes would be in various local areas of the earth, and what the effects of clouds would be in determining the rate at which the mean temperature would increase. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, air pollution episodes, and the consequence of these effects on the economy.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. About three-quarters of human emissions of CO_2 to the global atmosphere during the past 20 years are due to fossil fuel burning. Atmospheric concentrations of CO_2, CH_4, and N_2O have increased 31 percent, 151 percent, and 17 percent respectively since the year 1750 (CEC 2008). GHG emissions are typically expressed in carbon dioxide-equivalents (CO_2e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 21 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2.

3.8.2 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report (**Appendix A**) was prepared in April, 2019. The sections below detail the methodology of the report and its conclusions.

3.8.2.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated using CalEEmod, Version 2016.3.2. Emissions' modeling was assumed to occur over an approximate 12-month period and covering a site area of approximately 60 acres. Remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in **Appendix A**.

3.8.2.2 Long-Term Operational Emissions

Long-term operational emissions associated with the Project are estimated to be minimal in nature. Maintenance would be provided on an as needed basis by CID staff, and the operational equipment, such as the use of stationary electric recovery well would result in negligible emissions. Modeling assumptions and output files are included in **Appendix A**.

3.8.2.3 Thresholds of Significance

CEQA Guidelines Amendments became effective March 18, 2010. Included in the Amendments are revisions to the Appendix G Initial Study Checklist. In accordance with these Amendments, a project would be considered to have a significant impact to climate change if it would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or,
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

In accordance with SJVAPCD's *CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects*[14], proposed projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. Projects not complying with BPS would be considered less than significant if operational GHG emissions would be reduced or mitigated by a minimum of 29 percent, in comparison to business-as-usual (year 2004) conditions. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

3.8.2.4 Local

San Joaquin Valley Air Pollution Control District

SJVAPCD Climate Change Action Plan:

On August 21, 2008, the SJVAPCD Governing Board approved the District's Climate Change Action Plan with the following goals and actions:

Goals:

- Assist local land-use agencies with California Environmental Quality Act (CEQA) issues relative to projects with GHG emissions increases.
- Assist Valley businesses in complying with mandates of AB 32.
- Ensure that climate protection measures do not cause increase in toxic or criteria pollutants that adversely impact public health or environmental justice communities.

[14] Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf Accessed April 19, 2019

Actions:

- Authorize the Air Pollution Control Officer to develop GHG significance threshold(s) or other mechanisms to address CEQA projects with GHG emissions increases. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in the spring of 2009.
- Authorize the Air Pollution Control Officer to develop necessary regulations and instruments for establishment and administration of the San Joaquin Valley Carbon Exchange Bank for voluntary GHG reductions created in the Valley. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in spring 2009.
- Authorize the Air Pollution Control Officer to enhance the District's existing criteria pollutant emissions inventory reporting system to allow businesses subject to AB 32 emission reporting requirements to submit simultaneous streamlined reports to the District and the State of California with minimal duplication.
- Authorize the Air Pollution Control Officer to develop and administer voluntary GHG emission reduction agreements to mitigate proposed GHG increases from new projects.
- Direct the Air Pollution Control Officer to support climate protection measures that reduce GHG emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted area.

SJVAPCD CEQA Greenhouse Gas Guidance: On December 17, 2009, the SJVAPCD Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" and the policy, "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project specific greenhouse gas emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, that their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their greenhouse gas emissions, whether through project design elements or mitigation.

The SJVAPCD's approach is intended to streamline the process of determining if project-specific greenhouse gas emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified final CEQA document.

Best performance standards (BPS) to address operational emissions of a project would be established according to performance-based determinations. Projects complying with BPS would not require specific quantification of GHG emissions and would be determined to have a less than significant cumulative impact for GHG emissions. Projects not complying with BPS would require quantification of GHG emissions and demonstration that operational greenhouse gas emissions have been reduced or mitigated by 29 percent, as targeted by CARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an Environmental Impact Report is required, regardless of whether the project incorporates BPS.

APR 2025 – CEQA Determinations of Significance for Projects Subject to CARB's Cap-and Trade Regulation: The purpose of this policy is to provide guidance for the determination of significance for increases of GHG emissions associated with projects that are subject to CARB's cap-and-trade regulation. The SJVAPCD recognizes that the CARB's Cap-and-Trade Regulation is an adopted State-wide plan for reducing or mitigating GHG emissions from targeted industries. GHG emissions addressed by the Cap-and-

Trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions. Therefore, the SJVAPCD concluded that GHG emissions increases subject to CARB's Cap-and-Trade regulation would have a less than significant individual and cumulative impact on global climate change. This policy applies to projects for which the SJVAPCD is the lead agency, but is also useful for evaluation of other CEQA related projects for which the SJVAPCD may not be the lead agency.

Bay Area Air Quality Management District's Thresholds for Significance: Bay Area Air Quality Management District's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce Statewide GHG emissions. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant. Although the proposed Project is not located in the Bay Area, the Bay Area Air Quality Management District's thresholds for significance are based on the Statewide AB 32 objectives and would be used to quantify potential impacts related to GHG emissions. For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy or annual emissions less than 1,100 metric tons per year (MT/yr) of CO_2e. For stationary source projects, such as those requiring a permit from a local air district to operate, the threshold is 10,000 MT/yr of CO_2e.

Fresno County General Plan[15]: The Fresno County General Plan does not contain any goals or policies related to greenhouse gas or climate change.

3.8.3 Impact Assessment

VIII-a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? And

a) Less Than Significant Impact.

Short-Term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 3-13**. As indicated, construction of the Project would generate maximum annual emissions of approximately 421.3553 metric tons of carbon dioxide equivalent ($MTCO_2e$). Construction-related production of GHGs would be temporary and last approximately 12 months.

[15] Fresno County General Plan. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps Accessed April 19, 2019.

Table 3-13. Short-Term Construction-Generated GHG Emissions

Short-Term Construction-Generated GHG Emissions	
Year	**Emissions (MT CO_2e)(1)**
2019	118.5992
2020	421.3553
*AB 32 Consistency Threshold for Land-Use Development Projects**	*1,100*
*AB 32 Consistency Threshold for Stationary Source Projects**	*10,000*
Exceed Threshold?	No

1. *Emissions were quantified using the CalEEmod, Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*

* As published in the Bay Area Air Quality Management District's CEQA Air Quality Guidelines. Available online at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en Accessed April 19, 2019

Long-Term Operational Emissions

Estimated long-term operational emissions are summarized in **Table 3-14**. As indicated, operation of the Project would generate maximum annual emissions of approximately 0.00114 metric tons of carbon dioxide equivalent ($MTCO_2e$).

Table 3-14. Long-Term Operational GHG Emissions

Long-Term Operational GHG Emissions	
	Emissions (MT CO_2e)(1)
Estimated Total Annual Operational CO_2e Emissions	0.00114
*AB 32 Consistency Threshold for Land-Use Development Projects**	*1,100*
*AB 32 Consistency Threshold for Stationary Source Projects**	*10,000*
Exceed Threshold?	No

1. *Emissions were quantified using the CalEEmod, Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*

* As published in the Bay Area Air Quality Management District's CEQA Air Quality Guidelines. Available online at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en Accessed April 19, 2019.

Long-term operational emissions associated with the Project would include the use of a stationary electric recovery well. The well would meet current energy-efficiency requirements. Maintenance would be provided on an as needed basis by existing CID staff. There would not be a substantial increase in vehicle trips or vehicle miles travelled because maintenance would be provided on an as-needed basis. Furthermore, there is no population growth associated with the Project. Therefore, Project-related emissions of GHGs would be less than significant.

VIII-b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

b) Less Than Significant Impact. In accordance with SJVAPCD's recommended guidance, project-generated GHG emissions would be considered less than significant if: (1) the Project complies with applicable BPS; (2) operational GHG emissions would be reduced or mitigated by a minimum of 29 percent

in comparison to business-as usual (year 2004) conditions; or (3) project-generated emissions would comply with an approved plan or mitigation program.

The SJVAPCD recognizes that the CARB's Cap-and-Trade regulation is an adopted State-wide plan for reducing or mitigating GHG emissions from targeted industries. In June of 2014, the SJVAPCD issued APR-2025.[16] In this policy document, the SJVAPCD concluded that the combustion of fossil fuels including fuels associated with on- and off-road vehicles, are subject to Cap-and-Trade requirements. The SJVAPCD further concluded that through implementation of the Cap-and-Trade regulation, project specific GHG emissions generated by fossil fuel use would be fully mitigated.

As noted above in **Table 3-13** and **Table 3-14**, Project-generated GHG emissions would be attributable to the consumption of fossil fuels associated with the operation of on- and off-road vehicles. As discussed above, the SJVAPCD has determined that project-generated GHG emissions associated with the use of fossil fuels would be fully mitigated through implementation of CARB's Cap-and-Trade regulation and, therefore, would be considered have a less than significant individual and cumulative impact on the environment.

As discussed earlier in this document, the Cap-and-Trade regulation is a key component in California's AB 32 GHG-reduction goals. On August 21, 2008, the SJVAPCD Governing Board approved the District's Climate Change Action Plan (CCAP). The CCAP includes various recommended measures for the reduction of GHG emissions associated with development projects. However, of the measures recommended, none are applicable to the proposed Project.

The Project complies with the Bay Area Air Quality Management District's GHG emissions thresholds for significance. For the aforementioned reasons, implementation of the proposed Project is not anticipated to conflict with any applicable plan, policy or regulation for reducing the emissions of GHGs, nor would the proposed Project have a significant impact on the environment. The impact would be considered less than significant.

16 [16] APR 2025 https://www.valleyair.org/policies_per/Policies/APR-2025.pdf Accessed April 19, 2019

3.9 Hazards and Hazardous Materials

Table 3-15. Hazards and Hazardous Materials Impacts

Hazards and Hazardous Materials					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

3.9.1 Environmental Setting

3.9.1.1 Hazardous Materials

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board (SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups (SLIC) sites, Department of Defense (DOD) sites, and Land Disposal

program. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on March 20, 2019 determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project site or immediate surrounding vicinity.

3.9.1.2 Airports

The Fresno Yosemite International Airport is located approximately 17 miles northeast, the Selma Municipal Airport is located approximately 6.2 miles southwest, and the POM Wonderful airstrip is approximately 1.55 miles northwest of the Project.

3.9.1.3 Emergency Response Plan

The Fresno County Office of Emergency Services (OES) is located within the Department of Public Health and coordinates planning, preparedness, response and recovery efforts for disasters occurring within the unincorporated area of the County.

3.9.1.4 Sensitive Receptors

There is a single-family residence on an agricultural parcel approximately 80 feet west of the Project site. Also there is another single-family residence on an agricultural parcel approximately 215 feet northeast of the Project.

3.9.1.5 Local

Fresno County General Plan[17]: The Fresno County General Plan sets forth the following goals and policies relating to hazards and hazardous materials of the County and which have potential relevance to the Project's CEQA review:

Goal HS-A: To protect public health and safety by preparing for, responding to, and recovering from the effects of natural or technological disasters.

Policy HS-A.1: The County shall, through the Fresno County Operational Area Master Emergency Services Plan, maintain the capability to effectively respond to emergency incidents, including maintenance of an emergency operations center.

Goal HS-F: To minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

[17] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

Policy HS-F.3: The County, through its Hazardous Materials Incident Response Plan, shall coordinate and cooperate with emergency response agencies to ensure adequate countywide response to hazardous materials incidents.

3.9.2 Impact Assessment

IX-a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? and;

IX -b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

IX -c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

a-c) Less Than Significant Impact. Implementation of the Project would include the construction of approximately 60-acres of basins for CID. Construction of the Project could involve the use of hazardous materials associated with construction equipment, such as diesel fuel, lubricants, and solvents. However, the contractor may implement a SWPPP and would comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Furthermore, any potential accidental hazardous materials spills during construction are the responsibility of the contractor to remediate in accordance with industry best management practices and State and county regulations. Impacts would be less than significant.

IX -d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

d) No Impact. The Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on March 20, 2019 determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project site or immediate surrounding vicinity. There would be no impact.

IX -e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?; and,

e) Less Than Significant Impact. The Project is not located within an airport land use plan. The POM Wonderful private airstrip is approximately 1.55 miles northwest of the Project. Additionally, since the airstrip is considered private, this limits the amount of traffic and size of airplanes allowed to land on it. The Fresno Yosemite International Airport is located approximately 12 miles northwest. Construction of the Project would not be a safety hazard for people working in the area. Operation of the well site would not generate excessive noise, and any construction noise would be temporary. The impact would be less than significant.

IX -f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

f) Less Than Significant Impact. The Project includes the construction of approximately 60-acres of basins. Construction traffic associated with the Project would be minimal and temporary, lasting approximately one year. Operational traffic would consist of as-needed maintenance trips and would have no effect on roadways or emergency access. Road closures and detours are not anticipated as part of the

construction phase of the Project. Therefore, Project-related impacts to emergency evacuation routes or emergency response routes on local roadways would be considered less than significant.

IX -g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

g) No Impact. The Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The nearest wildland area is approximately eight miles northeast of the Project site. The Project does not include any residential components, nor would it require any employees to be stationed permanently at the site on a daily basis. There would be no impact.

3.10 Hydrology and Water Quality

Table 3-16. Hydrology and Water Quality Impacts

Hydrology and Water Quality					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☒	☐
	iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv)	impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.10.1 Environmental Setting

Fresno County is large and geographically diverse. The mountainous eastern region receives up to 70 inches precipitation annually, mostly in snowfall. Many small mountain lakes and streams and tributaries to the San Joaquin and Kings Rivers which flow into the Central Valley. The valley and western portion of the county, by contrast are very arid, with less than 10 inches of annual rainfall and seasonal streams. The foothills east and northeast of the city of Fresno have areas of vernal pools. The valley trough has large wetlands and wildlife refuge areas of importance to the Pacific Flyway. Additional areas in western Fresno County are being converted to wetland areas from retired agriculture land.

Groundwater conditions vary considerably from eastern to western Fresno County. aquifers east of the valley trough are generally semi-confined to unconfined. Water quality is good with the exception of some localized areas. Overdraft and recharge conditions vary considerably. Groundwater overdraft is occurring in the groundwater basin, particularly in areas that rely exclusively on groundwater.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. The Central Valley receives an average of 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The Project is located in the Central Valley region of the State Water Resource Board. According to the U.S. Geological Survey (USGS) classification system, the Project is located within the Cole Slough watershed; Hydrologic Unit Code (HUC): 180300120206.[18] The Project lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.[19]

3.10.1.1 Local

Fresno County General Plan[20]: The Fresno County General Plan sets forth the following goals and policies regarding hydrology and water quality and which have potential relevance to the Project's CEQA review:

Policy LU-A.20: The County shall adopt and support policies and programs that seek to protect and enhance surface water and groundwater resources critical to agriculture.

Goal PF-C: To ensure the availability of an adequate and safe water supply for domestic and agricultural consumption.

Policy PF-C.1: The County shall actively engage in efforts and support the efforts of others to retain existing water supplies within Fresno County.

Policy PF-C.4: The County shall support efforts to expand groundwater and/or surface water storage that benefits Fresno County.

Policy OS-A.6: The County shall support efforts to create additional water storage that benefits Fresno County, and is economically, environmentally, and technically feasible.

3.10.2 Impact Assessment

X-a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

a) Less Than Significant Impact. The State Water Resources Control Board (SWRCB) requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for projects that disturb one or more acres of soil. A SWPPP involves site planning and scheduling, limiting disturbed soil areas, and determining best management practices to minimize the risk of pollution and sediments being discharged from construction sites. Implementation of the SWPP would minimize the potential for the Project to substantially alter the existing drainage pattern in a manner that would result in substantial erosion or siltation onsite or offsite.

The intent of the basin Project is to help meet existing irrigation demands during the irrigation season when limited surface water is available, especially during times of a drought. Additionally, the project would increase the amount of groundwater recharge into the local underlying aquifer in order to assist the City of Parlier, a Disadvantaged Community that relies solely on groundwater. The Project would not generate any type of process or wastewater, therefore, would be no discharge of Project water to any surface source. As such, there would be no discharge directly associated with Project implementation that could impact water quality standards of any nearby waters of the United States. The impacts would be less than significant.

[18] USGS Watershed Maps. https://edits.nationalmap.gov/wbd-app/?loc=-119.5487,36.6160,13 Accessed March 19, 2019
[19] DWR Bulletin 118 Groundwater Basin Boundary Assessment Tool. https://gis.water.ca.gov/app/bbat/ Accessed March 19, 2019
[20] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

X -b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin?

b) Less Than Significant Impact. Local groundwater conditions have been quantified through collection of recent groundwater level information in the three borings completed to groundwater, recent measurement of water levels in two CID monitoring wells near the sites, review of DWR hydrographs for the two CID monitoring wells near the sites, and Depth to Groundwater maps for the Feasibility Study. Implementation of the Project would create and average annual water supply of approximately 1,320-acre feet (AF). The project would recharge an average annual amount of more than 2,268 AF/yr (estimated to be 3,500 AF/yr in the years water is recharged). There is no anticipated increase in water demand resulting from implementation of the Project. It would not interfere with the production rate of existing wells on neighboring parcels. The proposed basin would be at a strategic location to both receive water to bank and recover water to supply downstream demand on the Mill Ditch and Kingsburg Branch canal systems. Implementation of the Project would not impede sustainable groundwater management of the San Joaquin Valley Kings subbasin, nor would it substantially decrease ground water supplies. Rather, the project would actually help this portion of the subbasin reach sustainability. Any impacts would be less than significant.

X -c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site;

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

(iv) impede or redirect flood flows?

X -d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

c-d) Less Than Significant Impact. There are no streams or rivers onsite or in the immediate vicinity. The Project would consist of excavating to a uniform depth for the purpose of groundwater recharge. In order to minimize erosion and run-off during construction activities, a SWPPP may be implemented, and the contractor would comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Impacts would be less than significant.

X -e) Otherwise substantially degrade water quality?

e) No Impact. As discussed above in Impact Assessments IX-a and IX-c(iii), implementation of the Project would help alleviate water supply issues in the City of Parlier. Furthermore, construction activities would require implementation of a SWPPP and compliance with all Cal/OSHA regulations in order to reduce the potential for incidental release of pollutants or hazardous substances into surface water or groundwater. There would be no impact.

X-f) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

f) No Impact. Construction of this project would allow CID to divert water lost to the region, as well as other available surface waters, and divert them into the new basin and recharge the groundwater aquifer. The

Project would not conflict with or obstruct implementation of any water quality control plan or sustainable groundwater management plan. There would be no impact.

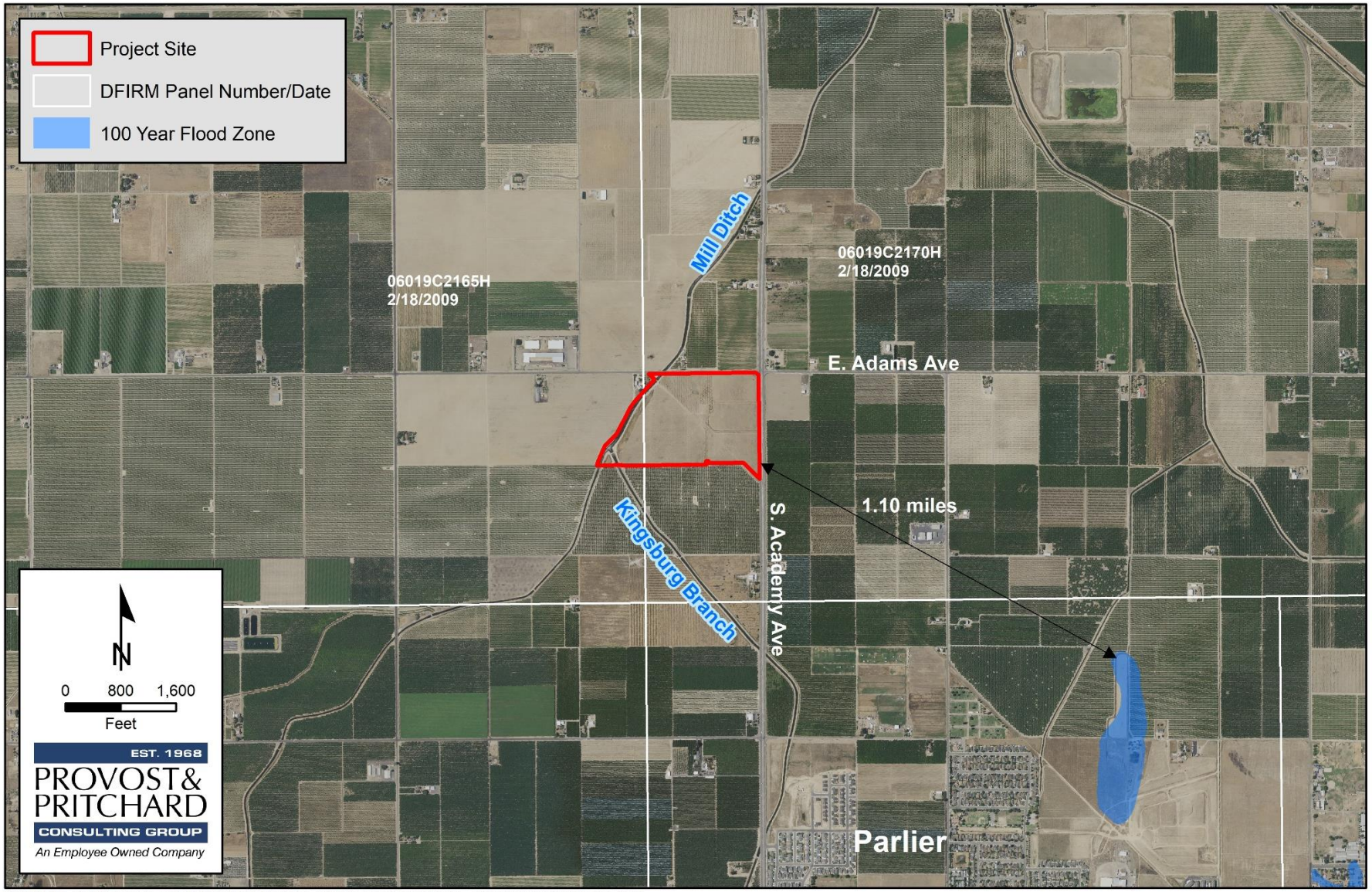


Figure 3-4. FEMA Flood Map

3.11 Land Use and Planning

Table 3-17. Land Use and Planning Impacts

Land Use and Planning					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

3.11.1 Environmental Setting

The Project is located within an unincorporated area of south-central Fresno County. The Project site is located approximately 7.4 miles east of State Route 99, more specifically, on the southwest corner of E. Adams Avenue and S. Academy Avenue. The Project site is surrounded by agricultural lands, sparse rural residences, and local water infrastructure.

The Project is located within vacant land zoned AE-20 (Exclusive Agriculture, 20-Acre minimum), by Fresno County. The Fresno County General Plan Land Use Map designates this area as Agriculture.[21] All adjacent properties are similar zoning and General Plan designations.

3.11.1.1 Local

Fresno County General Plan[22]: The Fresno County General Plan sets forth the following policies regarding land use and planning and which have potential relevance to the Project's CEQA review:

Policy PF-E.14: The County shall encourage the use of natural storm water drainage systems to preserve and enhance natural drainage features.

3.11.2 Impact Assessment

XI-a) Would the project physically divide an established community?

a) No Impact. The site of the Project is located on six vacant parcels approximately 60-acres in size. The Project site is zoned as AE-20 (Exclusive Agriculture, 20-acre minimum). Furthermore, the Project site is planned as agriculture by the Fresno County General Plan.[23] The Project is within the unincorporated area of Fresno County, a region primarily consisting of agriculture. The Project does not include the alteration of roads, trails, or paths that could be considered a connectivity network. Implementation of the Project would not divide an established community. There would be no impact.

[21] Fresno County General Plan. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps Accessed March 19, 2019.
[22] Ibid
[23] Ibid

XI-b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

b) Less Than Significant Impact. The Project is located on vacant land zoned AE-20 (Exclusive Agriculture, 20-acre minimum) and planned as Agriculture by Fresno County. Although the Property is zoned and planned for agricultural uses, Which includes water basins. The Project does not propose to expand into Fresno County right-of-way or other neighboring parcels.The purpose of the Project is to increase the amount of surface water recharge to the groundwater aquifer. As such, the Project would be considered a public facility and therefore would be consistent with all applicable plans, policies, ordinances, and regulations. Any impact would be less than significant.

3.12 Mineral Resources

Table 3-18. Mineral Resources Impacts

Mineral Resources					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.12.1 Environmental Setting

The Project is located in the south-central portion Fresno County, in the southern section of California's Great Valley Geomorphic Province, or Central Valley. Historically, Fresno County has been a leading producer of a variety of minerals including aggregate, fossil fuels, metals, and other materials used construction or in industrial processes. Currently, aggregate and petroleum are the County's most significant mineral resources. The Coalinga area, in western Fresno County, has been a valuable region for mineral resources as a top producer of commercial asbestos and home to extensive oil recovery operations.[24]

California Department of Conservation's Division of Oil, Gas, and Geothermal Resources maintains a database of oil wells in the Project area (DOGGR). According to the DOGGR Well Finder there is one plugged and abandoned well within two miles of the Project site (Hammerich-Hopkins Well No. 1). There are no active wells within two miles of the Project site.

There are no known current or historic mineral resource extraction or recovery operations in the Project vicinity nor are there any known significant mineral resources onsite.

3.12.1.1 Local

Fresno County General Plan[25]: The Fresno County General Plan sets forth the following goals and policies that protect the mineral resources of the County and none of which have potential relevance to the Project's CEQA review:

3.12.2 Impact Assessment

XII-a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

XII-b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

a-b) No Impact. The California Surface Mining and Reclamation Act of 1975 (SMARA) was created to address protecting the state's need for a continuing supply of mineral resources, while protecting public an

[24] Fresno County General Plan. Background Report. https://www.co.fresno.ca.us/home/showdocument?id=8398 Accessed March 19, 2019
[25] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

environmental health. SMARA requires that all cities incorporate into their general plans mapped mineral resource designations approved by the State Mining and Geology Board. The State Geologist classifies land in California based on availability of mineral resources. Because available aggregate construction material is limited, five designations have been established for the classification of sand, gravel and crushed rock resources: Scientific Resource, Mineral Resource Zone 1, Mineral Resources Zone 2, and Mineral Resource Zone 3, and Mineral Resource Zone 4.

According to the Department of Conservation Special Report 158, *Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region Sanger Plate,* the Project is within the Mineral Resource Zone 3. Mineral Resource Zone 3 is an area where the significance of mineral deposits cannot be determined from the available data. However, there are no known sources of mineral resources extraction or recovery operations in the Project vicinity nor any known significant mineral resources onsite.[26] Therefore, implementation of the Project would not result in the loss of availability of a known mineral resource since no known mineral resources occur in this area. Furthermore, the Project area has not been designated as a locally important mineral resource recovery site by a general plan, specific plan, or land use plan. There would be no impact.

[26] Fresno County General Plan Background Report https://www.co.fresno.ca.us/home/showdocument?id=8398 Accessed March 25, 2019

3.13 Noise

Table 3-19. Noise Impacts

Noise					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.13.1 Environmental Setting

The Project site is located in an unincorporated area of Fresno County, dominated by agricultural production. State Route 99 is the nearest highway, which is approximately 7.4 miles west of the Project site. The Project site is surrounded by primarily agricultural lands. The site is situated on the southwest corner of E. Adams Avenue and S. Academy Avenue. Residential development is sparse and spread out located on neighboring parcels. The Fresno Yosemite International Airport is located approximately 17 miles northeast, the Selma Municipal Airport is located approximately 6.2 miles southwest, and the POM Wonderful airstrip is approximately 1.55 miles northwest of the Project.

3.13.1.1 Local

Fresno County General Plan[27]: The Fresno County General Plan sets forth the following policies regarding noise and which have potential relevance to the Project's CEQA review:

Policy HS-G.1: The County shall require that all proposed development incorporate design elements necessary to minimize adverse noise impacts on surrounding land uses.

Policy HS-G.6: The County shall regulate construction-related noise to reduce impacts on adjacent uses in accordance with the County's Noise Control Ordinance.

Fresno County Noise Control Ordinance[28]: Chapter 8.40 of the Fresno County Municipal Code contains the Noise Control Ordinance, which places limits on noise levels and hours of construction. Section 8.40.060

[27] Fresno County General Plan. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps Accessed March 19, 2019.
[28] Fresno County Noise Control Ordinance. https://library.municode.com/ca/fresno_county/codes/code_of_ordinances?nodeId=TIT8HESA_CH8.40NOCO Accessed March 19, 2019.

states that noise sources associated with construction activities are exempt from the provisions of the Noise Control Ordinance, as long as construction does not take place before 6:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 7:00 a.m. or after 5:00 p.m. on Saturday or Sunday.

3.13.2 Impact Assessment

XIII-a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

a) Less Than Significant Impact. The construction phase of the Project would involve temporary noise sources, predominately from off-road equipment, such as excavators, backhoe/loader, drilling rigs, concrete truck, and concrete pumper. The Project is located adjacent to agricultural lands, accustomed to noises associated with farm equipment. The Project would comply with the Fresno County Noise Control Ordinance referenced in **Section 3.13.1.1**. Operational maintenance activities would be on an as-needed basis with routine monitoring performed by existing staff and would not generate significant new noise. Any impacts would be mild and temporary and therefore, less than significant.

XIII-b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

b) Less Than Significant Impact. The construction phase of the Project would primarily consist of excavation and grading as part of development of the new basins.

The Project is located adjacent to an area dominated by agricultural production with sparse residential development. Agricultural production commonly includes the use of off-road equipment and ground-disturbing activities regularly. During construction, Project-related construction activities would not vary substantially from the baseline conditions routinely experience on neighboring properties. Impacts would be less than significant.

XIII-c) For a project located within the vicinity of a private air strip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? and,

c) No Impact. The Project is not located within an airport land use plan of an airport. The Fresno Yosemite International Airport is located approximately 12 miles northwest and the Selma Municipal Airport is approximately more than 6.2 miles southwest and the POM Wonderful airstrip is approximately 1.55 northwest of the Project. The Project does not involve the development of habitable structures or require the presence of permanent staff onsite and the POM Wonderful Airport is considered a private airstrip, thus, reducing the amount of traffic to and from the airstrip. There would be no impact.

3.14 Population and Housing

Table 3-20. Population and Housing Impacts

Population and Housing					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

The Project is located within an unincorporated area in the south-central portion of Fresno County. The Project site is surrounded by agricultural lands, rural residential uses, and water infrastructure. The Project is located within vacant land zoned AE-20 (Exclusive Agriculture, 20-acre minimum) and planned by as Agriculture by the Fresno County General Plan.

According to 2017 Census data, Fresno County's population was 989,255 with an estimated percent change from 2010 to 2017 of 6.3%. As of 2013 to 2017, there was an average of 301,824 households with an average of 3.16 persons per house.[29]

3.14.2 Regulatory Setting

3.14.2.1 Local

Fresno County General Plan[30]: The Fresno County General Plan sets forth the following goals and policies regarding population and housing and none of which have potential relevance to the Project's CEQA review:

3.14.3 Impact Assessment

XIV-a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

XIV-b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

a-b) No Impact. The Project involves construction of approximately 60-acres of basins and related infrastructure. The goal of the Project is not to induce population growth, but to increase the amount of groundwater recharge for the underlying groundwater aquifer. The Project would not encourage population growth directly or indirectly beyond that previously analyzed by the Fresno County General Plan. No housing

[29] U.S. Census Data. https://www.census.gov/quickfacts/fact/table/fresnocountycalifornia/PST045217 Accessed March 19, 2019.
[30] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 19, 2019.

or habitable structures would be built, nor would any be removed. Implementation of the Project would not result in displacement of people or existing housing. Therefore, there would be no impact.

3.15 Public Services

Table 3-21. Public Services Impacts

Public Services					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Fire protection?	☐	☐	☐	☒
	Police protection?	☐	☐	☐	☒
	Schools?	☐	☐	☐	☒
	Parks?	☐	☐	☐	☒
	Other public facilities?	☐	☐	☐	☒

3.15.1 Environmental Setting

Fire Protection: The unincorporated parts of Fresno County are served by the Fresno County Fire Protection District. The nearest fire station is Parlier Station 71, which is approximately 2.3 miles southeast of the Project.

Police Protection: The Fresno County Sheriff's Department currently has 329 sworn officers serving the unincorporated population of Fresno County, for a ratio of 1.89 officers per 1,000 residents.[31] Police protection is provided by the Fresno County Sheriff. The closest patrol station is located in Parlier approximately 2.5 miles southeast of the Project site.

Schools: Public school services are provided throughout Fresno County by 35 school districts. The nearest school is the John C. Martinez Elementary School, approximately 1.4 miles south of the Project. The school is located in the Parlier Unified School District.

Parks: Regional recreational facilities within the County include ten developed and three undeveloped park sites, five fishing access areas, and boating facility. The nearest parks to the Project site are located within Parlier. The Veterans Park and Earl Ruth Park are approximately two miles southeast of the Project. The nearest County operated park is the Avocado Lake Park is approximately 17 miles northeast of the Project.

Landfills: Fresno County operates two active solid waste disposal facilities, or landfills: the American Avenue Landfill and the Coalinga Landfill. Portions of the unincorporated areas of the County use the Clovis Landfill

[31] Fresno County General Plan Background Report https://www.co.fresno.ca.us/home/showdocument?id=8398 Accessed March 19, 2019

and the Orange Avenue Landfill. The nearest landfill is the American Avenue Landfill, which is approximately 34 miles west of the Project. The American Avenue Landfill is undergoing expansion plans consisting of three phases.[32]

3.15.1.1 Local

Fresno County General Plan[33]: The Fresno County General Plan sets forth the following goals and policies regarding public services and none of which have potential relevance to the Project's CEQA review:

3.15.2 Impact Assessment

XV-a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) No Impact. The Project would not require the addition or alteration of any public services. The site is within the south-central portion of Fresno County and would utilize existing services provided by the County. There would be no impact.

Fire Protection – The Project site would continue to be served by the Fresno County Fire Protection District, Parlier Station 71 located approximately 2.3 miles southeast of the Project site. No structures are proposed for this project, therefore, there would be no impact to public fire services.

Police Protection – Fresno County would continue to provide sheriff protection services to the Project site upon implementation of the Project. Emergency response is adequate to the Project site. The closest sheriff station is located in Fresno approximately 2.5 miles southeast of the Project site. No residential or office construction is proposed for this Project and no additional police protection would be required. There would be no impact.

Schools – The Project site is located approximately 1.4 north of John C. Martinez Elementary School. Implementation would not include construction of any residential structures. The Project would not result in an increase of population that would require additional school facilities; therefore, there would be no impact.

Parks and other public facilities –As the Project would not induce population growth, the Project would not create a need for additional park or recreational services. Avocado Lake Park is the nearest regional park, located approximately 17 miles northeast of the Project site. The nearest park is located in Parlier, approximately two miles southeast of the Project. No public facilities would be impacted by this Project. The nearest landfill is the American Avenue Landfill, which is 34 miles west of the Project.

[32] [32] The County of Fresno website. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/resources-and-parks-division/landfill-operations. Accessed March 22, 2019.
[33] Fresno County General Plan Background Report. https://www.co.fresno.ca.us/home/showdocument?id=8398 Accessed March 18, 2019.

3.16 Recreation

Table 3-22. Recreation Impacts

Recreation					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.16.1 Environmental Setting

Fresno County has several regional parks, as well as State and national parks, national forest, wilderness areas, and other resources. Regional recreational facilities within the County include ten developed and three undeveloped park sites, five fishing access areas, and boating facility. The nearest parks to the Project site are located within Parlier. The Veterans Park and Earl Ruth Park are approximately two miles southeast of the Project.

3.16.1.1 Local

Fresno County General Plan[34]: The Fresno County General Plan sets forth the following goals and policies regarding public services and none of which have potential relevance to the Project's CEQA review:

3.16.2 Impact Assessment

XVI-a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

XVI-b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

a-b) No Impact. The Project includes the construction an approximately 60-acres of basins for groundwater recharging. It would not increase the demand for recreational facilities or put a strain on the existing recreational facilities. No population growth would be associated with the Project or be necessitated by the Project. Furthermore, the Project does not include recreational facilities. As there is no population growth associated with the Project, construction or expansion of nearby recreational facilities would not be necessary. There would be no impact.

[34] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

3.17 Transportation

Table 3-23. Transportation/Traffic Impacts

Transportation/Traffic					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d)	Result in inadequate emergency access?	☐	☐	☒	☐

3.17.1 Environmental Setting

Fresno County's circulation system consists of a roadway network that is primarily rural in character, with exception of the urbanized area surrounding the cities of Fresno and Clovis and various smaller communities in the southern and western parts of the county. The most important inter-regional roadways within the county are the state highways particularly State Route 99, State Route 41, and Interstate 5.

The Project site is within an unincorporated area in the south-central Fresno County, specifically on the southwest corner of E. Adams Avenue and S. Academy Avenue. The Project vicinity is dominated by agricultural uses, sparse rural residential, and water infrastructure. State Route 99 is the nearest highway, approximately 7.4 miles west of the Project site. S. Academy Avenue is considered an arterial street and has four lanes with a center divider. E. Adams Avenue is a collector street that is comprised of two lanes. Both streets are adjacent to the properties north and east property boundary. There are no public improvements proposed along the property boundary. Traffic generation after project implementation would be minimal and dedicated to only basin maintenance on an as-needed basis.

3.17.1.1 Local

Fresno County General Plan[35]: The Fresno County General Plan sets forth the following goals and policies regarding transportation and none of which have potential relevance to the Project's CEQA review:

[35] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

3.17.2 Impact Assessment

XVII-a) Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

XVII-b) Would the project conflict or be inconsistent with CEQA Guidelines section 150643. Subdivision (b)?

a-b) Less Than Significant Impact. The Project includes the construction of an approximately 60-acre groundwater recharge basin for CID. Construction traffic associated with the Project would be minimal and temporary, lasting approximately one year. Operational traffic consists of as-needed maintenance trips. No road improvements are proposed apart from the Project. There would not be a significant adverse effect to existing roadways in the area.

Construction associated with the Project would be restricted to the Project site and it would not intersect any roadways, or pedestrian or bicycle paths. These construction-related impacts would be temporary and there would be no impacts to the surrounding transportation network. Although road closures and detours are not anticipated as part of construction, temporary lane diversions may be necessary for the movement of construction equipment on and offsite.

There is no population growth associated with the Project, nor would implementation of the Project result in an increase of staff or drivers utilizing roadways in the area. Therefore, implementation of the Project would not increase the demand for any changes to congestion management programs or interfere with existing level of service standards during the operational phase. Construction-related roadway interferences would be less than significant in nature.

XVII-c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

c) No Impact. No new roadway design features are associated with the Project. As mentioned in Impact Assessments XVI-a and b above, all potential disturbances to roadways would be temporary. Therefore, there would be no impact.

XVII-d) Result in inadequate emergency access?

d) Less Than Significant Impact. As mentioned above in Impact Assessments XVI-a, b, and c, the Project does not propose new roadway design features or permanent alterations to roadways. All potential disturbances to roadways during construction would be temporary. Road closures and detours are not anticipated as part of the construction phase of the Project; however, temporary lane diversions may be necessary for the movement of construction equipment on and offsite. Disturbances to traffic patterns, such as a potential lane diversion would be temporary and minimal in nature. The operational phase of the Project would have no effect on roadways or emergency access. Therefore, overall potential Project-related impacts to emergency access on local roadways would be considered less than significant.

3.18 Tribal Cultural Resources

Table 3-24. Tribal Cultural Resources Impacts

Tribal Cultural Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	☐	☒	☐	☐
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.18.1 Environmental Setting

3.18.1.1 Regional Setting

3.18.1.2 Local

Fresno County General Plan[36]: The Fresno County General Plan sets forth the following goals and policies that protect the tribal cultural resources of the County and which have potential relevance to the Project's CEQA review:

Goal OS-J: To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment.

Policy OS-J.2: Historic Resources Consideration. The County shall consider historic resources during preparation or evaluation of plans and discretionary development projects.

[36] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

Policy OS-J.3 The County shall solicit the views of the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or sites of cultural importance.

3.18.2 Impact Assessment

XVIII-a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

XVIII-a-i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)

XVIII-a-ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

a-i-a-ii) Less than Significant Impact with Mitigation Incorporated. The District, as a public lead agency has not received any formal requests for notification from any State tribes, pursuant to AB52. A records search was conducted at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. A record search of the Native American Heritage Commission (NAHC) Sacred Lands File was also conducted, which resulted in a declaration that no sacred sites or tribal cultural resources are known to exist within the Project site or in the vicinity.

In addition to the record search of the Sacred Lands File, NAHC provided a list of 13 local Native American Tribal contacts, representing 10 different Native American Tribes who may have knowledge of cultural resources in the vicinity or general interest in the Project. The following 13 Tribal contacts were communicated with in writing via U.S. Mail with a letter dated March 20, 2019 informing them of the Proposed Project.

1. *Big Sandy Rancheria of Western Mono Indians, Elizabeth D. Kipp, Chairperson*
2. *Cold Springs Rancheria, Carol Bill, Chairperson*
3. *Dumna Wo-Wah Tribal Government, Robert Ledger SR, Tribal Chairperson*
4. *Dunlap Band of Mono Indians, Benjamin Chrley Jr., Tribal Chair*
5. *Dunlap Band of Mono Indians, Dick Charley, Tribal Secretary*
6. *Kings River Choinumni Farm Tribe, Stan Alec*
7. *North Fork Mono Tribe, Ron Goode, Chairperson*
8. *Santa Rosa Indian Community of the Santa Rosa Rancheria, Rueben Barrios Sr., Chairperson*
9. *Table Mountain Rancheria of California, Leanne Walker-Grant, Chairperson*
10. *Table Mountain Rancheria of California, Bob Pennell, Cultural Resources Director*
11. *Traditional Choinumni Tribe, David Alvarez, Chairperson*
12. *Traditional Choinumni Tribe, Rick Osbourne, Cultural Resources*
13. *Wuksache Indian Tribe/Eshom Valley Band, Kenneth Woodrow, Chairperson*

No written responses were received. As noted earlier, one telephone response was received from Kenneth Woodrow, Chairperson for the Wuksache Indian Tribe/Eshom Valley Band. In the telephone call to Provost & Pritchard, Mr. Woodrow asked how far the project site was from the Kings River and requested a copy of the Record Search which was emailed to him on April 1, 2019. He did not provide any recommendations or concerns regarding Proposed Project Implementation. All Tribal correspondence is included within Error! Reference source not found. to this initial study.

Although it is unlikely that archeological remains would occur during construction or operation of the Proposed Project, CUL-1 is to be considered.

3.19 Utilities and Service Systems

Table 3-25. Utilities and Service Systems Impacts

Utilities and Service Systems					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reductions goals?	☐	☐	☒	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

3.19.1 Environmental Setting

3.19.1.1 Water Supply

The Project lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.[37] Declines in groundwater basin storage and groundwater overdraft are recurring problems in the Central Valley. Measures for ensuring the continued availability of groundwater to meet demands have been identified and planned in several areas of the county. The measures include groundwater conservation and recharge, and supplementing or replacing groundwater sources for irrigation with surface water.

3.19.1.2 Wastewater Collection and Treatment

The nearest municipal wastewater treatment facilities are the Parlier Wastewater Treatment Facility, approximately 3 miles southeast of the Project, Sanger Treatment Facility approximately 3.5 miles northeast of the Project, and Fresno Wastewater Treatment and Collection System, Facility, located approximately 18 miles west of the Project. The Project does not propose to create wastewater during operation. There would be no need to connect to a wastewater treatment system.

[37] DWR Bulletin 118 Groundwater Basin Boundary Assessment Tool. https://gis.water.ca.gov/app/bbat/ Accessed March 22, 2019.

3.19.1.3 Landfills

Fresno County operates two active solid waste disposal facilities, or landfills: the American Avenue Landfill and the Coalinga Landfill. Portions of the unincorporated areas of the County use the Clovis Landfill and the Orange Avenue Landfill. The nearest landfill is the American Avenue Landfill, which is approximately 34 miles west of the Project. The American Avenue Landfill is undergoing expansion plans consisting of three phases.[38]

3.19.1.4 Local

Fresno County General Plan[39]: The Fresno County General Plan sets forth the following policies regarding utilities and service systems and which have potential relevance to the Project's CEQA review:

Policy PF-F.3: The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.

Policy PF-C.19: The County shall discourage the proliferation of small community water systems.

Policy PF-C.20: The County shall not permit new private water wells within areas served by a public water system.

Policy PF-C.14: The County shall require that water supplies serving new development meet U.S. Environmental Protection Agency and California Department of Health and Services and other water quality standards.

Policy PF-C.11: The County shall assure an ongoing water supply to help sustain agriculture and accommodate future growth by allocation of resources necessary to carry out the water resource management programs.

3.19.2 Impact Assessment

XIX-a) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

a) No Impact. The Project would not exceed wastewater treatment requirements or require new facilities. The Project consists of the construction of approximately 60-acres basins, onsite piping, and appurtenances for diverting water from existing District facilities. The Project would not generate wastewater or require expansion of existing facilities. There would be no impact.

XIX -b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

b) Less Than Significant Impact. The Project intends to reduce groundwater overdraft within CID by construction of the Project. The Project would create an average annual water supply of approximately 1,320 AF. The project would recharge an average annual amount of more than 2,268AF/yr (estimated to be 3,500AF/yr in the years water is recharged). The Project would be diverting surface water from existing District facilitates and accumulating the water in the basins with the intention of recharging. Therefore, water

[38] [38] The County of Fresno website. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/resources-and-parks-division/landfill-operations. Accessed March 22, 2019.
[39] Fresno County General Plan. https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/general-plan-maps Accessed March 22, 2019.

supplies are available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts would be less than significant.

XIX -c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

c) No Impact. The Project does not propose any commercial, industrial, or residential structures. Therefore, it would not create a wastewater demand on any wastewater treatment provider, nor would it require any wastewater treatment facilities at the Project site, so there would be no need for any sort of capacity determination by a wastewater treatment provider. There would be no impact.

XIX -d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

d) Less Than Significant Impact. There would be no solid waste associated with the operational phase of the Project. Waste associated with construction would be minimal and temporary, most of which would be recycled. Therefore, impacts would be less than significant.

XIX -e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

e) No Impact. Implementation of the Project involves the construction of approximately 60-acres of groundwater recharge basins. The Project is not anticipated to produce any solid waste. Furthermore, the Project would continue to comply with any federal, State, and local regulations regarding solid waste. There would be no impact.

3.20 Wildfire

Table 3-26. Wildfire Impacts

Wildfire					
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire?	☐	☐	☐	☒
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

3.20.1 Environmental Setting

The Project is located on unincorporated land in Fresno County, northwest of Parlier. The Project site is in a flat urbanized area of the Central San Joaquin Valley. The construction would be taking place on six parcels, totaling approximately 60-acres in size. The Project would consist of the construction of a new groundwater recharge basins. No structures are being constructed as part of the Project, and the Project is not considered to be population growth inducing.

3.20.1.1 Local

Fresno County General Plan[40]: The Fresno County General Plan sets forth the following goals and policies regarding wildfire and none of which have potential relevance to the Project's CEQA review:

3.20.2 Impact Assessment

XX-a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

[40] Fresno County General Plan. https://www.co.fresno.ca.us/home/showdocument?id=18117 Accessed March 18, 2019.

XX-b) Would the project, due to slope, prevailing winds, or other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire?

XX-c) Would the project Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

XX-d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

a-d) No Impact. The Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The nearest State Responsibility Area (SRA) is approximately eight miles to the northeast of the Project site. Additionally, the site is approximately 21 miles from the nearest Very High classification of Fire Hazard Severity Zone (FHSZ). Therefore, further analysis of the Projects potential impacts to wildfire are not warranted. There would be no impacts.

3.21 CEQA Mandatory Findings of Significance

Table 3-27. Mandatory Findings of Significance Impacts

Mandatory Findings of Significance					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

3.21.1 Impact Assessment

XXI-a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

a) Less Than Significant Impact with Mitigation Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, would have a less than significant effect on the environment. The potential for impacts to biological resources, geology and soils, and cultural resources from the implementation of the proposed Project would be less than significant with the incorporation of the mitigation measures discussed in **Chapter 4, Mitigation Monitoring and Reporting Program**. Accordingly, the Project would involve no potential for significant impacts through the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period of California history or prehistory.

XXI -b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

b) Less Than Significant Impact. CEQA Guidelines Section 15064(i) States that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The Project would include the construction of approximately 60-acres of basins, onsite piping and appurtenances for diverting water into the basins. No additional roads would be constructed as a result of the Project, nor would any additional public services be required. The Project is intended to improve water quality and would not result in direct or indirect population growth. Therefore, implementation of the Project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant through the implementation of mitigation measures and basic regulatory requirements incorporated into future Project design.

XXI -c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

c) Less than Significant Impact. The Project would include the construction of approximately 60-acres basins, onsite piping and appurtenances for diverting water into the basins. The Project in and of itself would not create a significant hazard to the public or the environment. On the contrary, implementation of the Project would correct water quality issues experienced by the community of Caruthers. Construction-related air quality/dust exposure impacts could occur temporarily as a result of project construction. However, implementation of basic regulatory requirements identified in this IS/MND would ensure that impacts are less than significant. Therefore, the proposed Project would not have any direct or indirect adverse impacts on humans. This impact would be less than significant.

4 Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Consolidated Irrigation District Adams and Academy Basin Project (Project) in Fresno County. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 4-1 presents the mitigation measures identified for the proposed Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, AIR-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of **Table 4-1** identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last columns would be used by CID to ensure that individual mitigation measures have been complied with and monitored.

Table 4-1. Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
Biological Resources					
Mitigation Measure BIO-1: Nesting Birds					
The only suitable nesting habitat includes the structures housing swallow nests over Mill Ditch. To address potential impacts to nesting swallows, a 50-foot construction-free buffer around active swallow nests during nesting season (February 1 through August 31) shall be implemented.	Prior to construction	During nesting season	CID		
Cultural Resources					
Mitigation Measure CUL-1: Archaeological Resources					
In the event that archaeological resources are encountered at any time during development or ground-moving activities within the entire project area, all work in the vicinity of the find shall halt until a qualified archaeologist can assess the discovery. The District shall implement all recommendations of the archaeologist necessary to avoid or reduce to a less than significant level potential impacts to cultural resource. Appropriate actions could include a Data Recovery Plan or preservation in place.	In the event archaeological resources are uncovered	During excavation	CID		
Mitigation Measure CUL-2: Human Remains					
If human remains are uncovered, or in any other case when human remains are discovered during construction, the Tulare County Coroner is to be notified to arrange proper treatment and disposition. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC would then identify the Most Likely Descendent who would determine the manner in which the remains are treated.	In the event human remains are uncovered	During excavation	CID		

5 References

List of Sources, Agencies and Persons Consulted:

AB-52 Native Americans: California Environmental Quality Act
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52

California Department of Resources Recycling and Recovery (CalRecycle) website:
http://www.calrecycle.ca.gov/

California Department of Toxic Substances Control website:
http://www.envirostor.dtsc.ca.gov/public/

California Department of Conservation's Farmland Mapping and Monitoring Program
https://maps.conservation.ca.gov/

California Department of Fish and Wildlife: https://www.wildlife.ca.gov/Data/CNDDB

California Emissions Estimator Model (CalEEMod), version 2013.2.2

California State Water Resources Control Board website: http://geotracker.waterboards.ca.gov/ and
http://www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml

Caltrans http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html

Federal Emergency Management Agency (FEMA), Flood Map Service Center website:
http://msc.fema.gov/portal

Google Earth: https://www.google.com/earth/

Native American Heritage Commission http://nahc.ca.gov/

San Joaquin Valley Air Pollution Control District http://www.valleyair.org/aqinfo/attainment.htm

State Water Resources Control Board, GeoTracker http://geotracker.waterboards.ca.gov/

U.S. Fish & Wildlife Service National Wetlands Inventor: https://www.fws.gov/wetlands/

6 List of Preparers

The following firms, individuals, and agency staff contributed to the preparation of this document:

Provost & Pritchard Consulting Group:
Briza Sholars – Project Manager/Senior Planner/QAQC
Trevor Stearns – GIS/Assistant Planner
Brooke Fletcher – Biologist/Assistant Planner
Jackie Lancaster – Administrative Support

Appendix A

Air Quality and Greenhouse Gas Emissions Evaluation Report

CID- Adams and Academy Basin

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	60.00	Acre	60.00	2,613,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Estimated 12 month construction period.

Grading - Total 60 acres, divided between 2 phases.

Demolition - No material exported.

Trips and VMT - No import/export of material. No haul trips.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	85.00
tblConstructionPhase	NumDays	110.00	85.00
tblConstructionPhase	NumDays	40.00	85.00
tblConstructionPhase	PhaseEndDate	1/6/2020	1/27/2020
tblConstructionPhase	PhaseEndDate	8/3/2020	9/21/2020
tblConstructionPhase	PhaseEndDate	3/2/2020	5/25/2020
tblConstructionPhase	PhaseStartDate	3/3/2020	5/26/2020
tblConstructionPhase	PhaseStartDate	1/7/2020	1/28/2020
tblGrading	AcresOfGrading	212.50	30.00
tblGrading	AcresOfGrading	0.00	30.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1183	1.1824	0.7434	1.3200e-003	3.9600e-003	0.0593	0.0632	1.0500e-003	0.0551	0.0562	0.0000	117.8018	117.8018	0.0319	0.0000	118.5992
2020	0.4014	4.2564	2.5281	4.7500e-003	1.0696	0.2016	1.2713	0.5699	0.1857	0.7556	0.0000	418.0981	418.0981	0.1303	0.0000	421.3553
Maximum	**0.4014**	**4.2564**	**2.5281**	**4.7500e-003**	**1.0696**	**0.2016**	**1.2713**	**0.5699**	**0.1857**	**0.7556**	**0.0000**	**418.0981**	**418.0981**	**0.1303**	**0.0000**	**421.3553**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1183	1.1824	0.7434	1.3200e-003	3.9600e-003	0.0593	0.0632	1.0500e-003	0.0551	0.0562	0.0000	117.8017	117.8017	0.0319	0.0000	118.5990
2020	0.4014	4.2564	2.5281	4.7500e-003	0.4257	0.2016	0.6274	0.2245	0.1857	0.4102	0.0000	418.0977	418.0977	0.1303	0.0000	421.3548
Maximum	**0.4014**	**4.2564**	**2.5281**	**4.7500e-003**	**0.4257**	**0.2016**	**0.6274**	**0.2245**	**0.1857**	**0.4102**	**0.0000**	**418.0977**	**418.0977**	**0.1303**	**0.0000**	**421.3548**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.98**	**0.00**	**48.25**	**60.49**	**0.00**	**42.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2019	12-31-2019	1.2953	1.2953
2	1-1-2020	3-31-2020	1.4190	1.4190
3	4-1-2020	6-30-2020	1.6204	1.6204
4	7-1-2020	9-30-2020	1.6243	1.6243
		Highest	1.6243	1.6243

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2235	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0700e-003	1.0700e-003	0.0000	0.0000	1.1400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2235**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0700e-003**	**1.0700e-003**	**0.0000**	**0.0000**	**1.1400e-003**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2235	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0700e-003	1.0700e-003	0.0000	0.0000	1.1400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2235**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0700e-003**	**1.0700e-003**	**0.0000**	**0.0000**	**1.1400e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2019	1/27/2020	5	85	
2	Site Preparation	Site Preparation	1/28/2020	5/25/2020	5	85	
3	Grading	Grading	5/26/2020	9/21/2020	5	85	

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 30

Acres of Paving: 60

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1159	1.1808	0.7280	1.2800e-003		0.0592	0.0592		0.0551	0.0551	0.0000	114.2669	114.2669	0.0318	0.0000	115.0616
Total	**0.1159**	**1.1808**	**0.7280**	**1.2800e-003**		**0.0592**	**0.0592**		**0.0551**	**0.0551**	**0.0000**	**114.2669**	**114.2669**	**0.0318**	**0.0000**	**115.0616**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3400e-003	1.5400e-003	0.0154	4.0000e-005	3.9600e-003	3.0000e-005	3.9800e-003	1.0500e-003	2.0000e-005	1.0800e-003	0.0000	3.5350	3.5350	1.1000e-004	0.0000	3.5376
Total	**2.3400e-003**	**1.5400e-003**	**0.0154**	**4.0000e-005**	**3.9600e-003**	**3.0000e-005**	**3.9800e-003**	**1.0500e-003**	**2.0000e-005**	**1.0800e-003**	**0.0000**	**3.5350**	**3.5350**	**1.1000e-004**	**0.0000**	**3.5376**

3.2 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1159	1.1808	0.7280	1.2800e-003		0.0592	0.0592		0.0551	0.0551	0.0000	114.2668	114.2668	0.0318	0.0000	115.0615
Total	**0.1159**	**1.1808**	**0.7280**	**1.2800e-003**		**0.0592**	**0.0592**		**0.0551**	**0.0551**	**0.0000**	**114.2668**	**114.2668**	**0.0318**	**0.0000**	**115.0615**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3400e-003	1.5400e-003	0.0154	4.0000e-005	3.9600e-003	3.0000e-005	3.9800e-003	1.0500e-003	2.0000e-005	1.0800e-003	0.0000	3.5350	3.5350	1.1000e-004	0.0000	3.5376
Total	**2.3400e-003**	**1.5400e-003**	**0.0154**	**4.0000e-005**	**3.9600e-003**	**3.0000e-005**	**3.9800e-003**	**1.0500e-003**	**2.0000e-005**	**1.0800e-003**	**0.0000**	**3.5350**	**3.5350**	**1.1000e-004**	**0.0000**	**3.5376**

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0315	0.3154	0.2067	3.7000e-004		0.0158	0.0158		0.0147	0.0147	0.0000	32.2987	32.2987	9.1200e-003	0.0000	32.5266
Total	**0.0315**	**0.3154**	**0.2067**	**3.7000e-004**		**0.0158**	**0.0158**		**0.0147**	**0.0147**	**0.0000**	**32.2987**	**32.2987**	**9.1200e-003**	**0.0000**	**32.5266**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	3.9000e-004	3.9600e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9860	0.9860	3.0000e-005	0.0000	0.9867
Total	**6.2000e-004**	**3.9000e-004**	**3.9600e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9860**	**0.9860**	**3.0000e-005**	**0.0000**	**0.9867**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0315	0.3154	0.2067	3.7000e-004		0.0158	0.0158		0.0147	0.0147	0.0000	32.2986	32.2986	9.1200e-003	0.0000	32.5266
Total	**0.0315**	**0.3154**	**0.2067**	**3.7000e-004**		**0.0158**	**0.0158**		**0.0147**	**0.0147**	**0.0000**	**32.2986**	**32.2986**	**9.1200e-003**	**0.0000**	**32.5266**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	3.9000e-004	3.9600e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9860	0.9860	3.0000e-005	0.0000	0.9867
Total	**6.2000e-004**	**3.9000e-004**	**3.9600e-003**	**1.0000e-005**	**1.1400e-003**	**1.0000e-005**	**1.1500e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9860**	**0.9860**	**3.0000e-005**	**0.0000**	**0.9867**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7837	0.0000	0.7837	0.4238	0.0000	0.4238	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1733	1.8027	0.9143	1.6200e-003		0.0934	0.0934		0.0859	0.0859	0.0000	142.0804	142.0804	0.0460	0.0000	143.2292
Total	**0.1733**	**1.8027**	**0.9143**	**1.6200e-003**	**0.7837**	**0.0934**	**0.8771**	**0.4238**	**0.0859**	**0.5097**	**0.0000**	**142.0804**	**142.0804**	**0.0460**	**0.0000**	**143.2292**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-003	2.0900e-003	0.0213	6.0000e-005	6.1200e-003	4.0000e-005	6.1600e-003	1.6300e-003	4.0000e-005	1.6600e-003	0.0000	5.2933	5.2933	1.4000e-004	0.0000	5.2969
Total	**3.3000e-003**	**2.0900e-003**	**0.0213**	**6.0000e-005**	**6.1200e-003**	**4.0000e-005**	**6.1600e-003**	**1.6300e-003**	**4.0000e-005**	**1.6600e-003**	**0.0000**	**5.2933**	**5.2933**	**1.4000e-004**	**0.0000**	**5.2969**

3.3 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3057	0.0000	0.3057	0.1653	0.0000	0.1653	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1733	1.8027	0.9143	1.6200e-003		0.0934	0.0934		0.0859	0.0859	0.0000	142.0802	142.0802	0.0460	0.0000	143.2290
Total	**0.1733**	**1.8027**	**0.9143**	**1.6200e-003**	**0.3057**	**0.0934**	**0.3990**	**0.1653**	**0.0859**	**0.2512**	**0.0000**	**142.0802**	**142.0802**	**0.0460**	**0.0000**	**143.2290**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-003	2.0900e-003	0.0213	6.0000e-005	6.1200e-003	4.0000e-005	6.1600e-003	1.6300e-003	4.0000e-005	1.6600e-003	0.0000	5.2933	5.2933	1.4000e-004	0.0000	5.2969
Total	**3.3000e-003**	**2.0900e-003**	**0.0213**	**6.0000e-005**	**6.1200e-003**	**4.0000e-005**	**6.1600e-003**	**1.6300e-003**	**4.0000e-005**	**1.6600e-003**	**0.0000**	**5.2933**	**5.2933**	**1.4000e-004**	**0.0000**	**5.2969**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2719	0.0000	0.2719	0.1424	0.0000	0.1424	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1891	2.1334	1.3582	2.6400e-003		0.0924	0.0924		0.0850	0.0850	0.0000	231.5583	231.5583	0.0749	0.0000	233.4305
Total	**0.1891**	**2.1334**	**1.3582**	**2.6400e-003**	**0.2719**	**0.0924**	**0.3642**	**0.1424**	**0.0850**	**0.2274**	**0.0000**	**231.5583**	**231.5583**	**0.0749**	**0.0000**	**233.4305**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6700e-003	2.3300e-003	0.0236	7.0000e-005	6.8000e-003	4.0000e-005	6.8400e-003	1.8100e-003	4.0000e-005	1.8500e-003	0.0000	5.8815	5.8815	1.6000e-004	0.0000	5.8854
Total	**3.6700e-003**	**2.3300e-003**	**0.0236**	**7.0000e-005**	**6.8000e-003**	**4.0000e-005**	**6.8400e-003**	**1.8100e-003**	**4.0000e-005**	**1.8500e-003**	**0.0000**	**5.8815**	**5.8815**	**1.6000e-004**	**0.0000**	**5.8854**

3.4 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1060	0.0000	0.1060	0.0555	0.0000	0.0555	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1891	2.1334	1.3582	2.6400e-003		0.0924	0.0924		0.0850	0.0850	0.0000	231.5580	231.5580	0.0749	0.0000	233.4302
Total	**0.1891**	**2.1334**	**1.3582**	**2.6400e-003**	**0.1060**	**0.0924**	**0.1984**	**0.0555**	**0.0850**	**0.1405**	**0.0000**	**231.5580**	**231.5580**	**0.0749**	**0.0000**	**233.4302**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6700e-003	2.3300e-003	0.0236	7.0000e-005	6.8000e-003	4.0000e-005	6.8400e-003	1.8100e-003	4.0000e-005	1.8500e-003	0.0000	5.8815	5.8815	1.6000e-004	0.0000	5.8854
Total	**3.6700e-003**	**2.3300e-003**	**0.0236**	**7.0000e-005**	**6.8000e-003**	**4.0000e-005**	**6.8400e-003**	**1.8100e-003**	**4.0000e-005**	**1.8500e-003**	**0.0000**	**5.8815**	**5.8815**	**1.6000e-004**	**0.0000**	**5.8854**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.481390	0.032808	0.168621	0.127212	0.018382	0.004997	0.032622	0.122881	0.002369	0.001675	0.005261	0.001115	0.000667

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2235	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0700e-003	1.0700e-003	0.0000	0.0000	1.1400e-003
Unmitigated	0.2235	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0700e-003	1.0700e-003	0.0000	0.0000	1.1400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0545					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0700e-003	1.0700e-003	0.0000	0.0000	1.1400e-003
Total	**0.2235**	**1.0000e-005**	**5.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0700e-003**	**1.0700e-003**	**0.0000**	**0.0000**	**1.1400e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0545					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0700e-003	1.0700e-003	0.0000	0.0000	1.1400e-003
Total	**0.2235**	**1.0000e-005**	**5.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0700e-003**	**1.0700e-003**	**0.0000**	**0.0000**	**1.1400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Survey Results Memo

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

Memorandum

To:	Consolidated Irrigation District: Adams and Academy Basin Project File
From:	Brooke Fletcher, Biologist
Subject:	Biological Survey Results
Date:	April 5, 2019

Comments:

As requested, on April 5, 2019 Provost & Pritchard conducted a biological reconnaissance survey and habitat assessment of the Adams and Academy Basin Project site. The findings were rather unremarkable and therefore will be summarized briefly in this memorandum.

The Project site is classified as ruderal due to a high level of current and ongoing ground disturbance activities involving heavy equipment. The majority of the site was barren and mechanically graded at the time of the field survey. Piles of excavated dirt were present. The slightly-less-disturbed perimeter of the site contained common weedy vegetation, most of which is invasive. *Amsinckia menziesii, Brassica nigra, Brassica rapa*, *Capsella bursa-pastoris*, *Bromus diandrus*, *Bromus madritensis*, *Hordeum murinum*, *Erdoium botrys*, and *Malva parviflora* were a few of the prevalent species observed.

The Project site is surrounded by existing paved roads, canal infrastructure, a rural home, and active farmland, predominantly in orchards. A large pack of aggressive and territorial feral dogs inhabit the site. Between the ongoing disturbance from the use of heavy equipment and the presence of feral dogs, the majority of the Project site provides essentially no value to wildlife species as habitat, foraging ground, or as a movement corridor. Ground squirrels (*Spermophilus beecheyi*) were observed along the perimeter of the site and active cliff swallow (*Petrochelidon pyrrhonota*) nests were observed on several of the structures over Mill Ditch. Cliff swallows are extremely tolerant of disturbance, and a construction-free buffer of 50 feet should be more than adequate to protect nesting colonies during nesting season (February 1 through August 31).

In addition to those already mentioned, the following disturbance-tolerant species were observed during the field survey: killdeer (*Charadrius vociferous*), mallard (*Anas platyrhynchos*), California scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), house sparrow (*Passer domesticus*), and mourning dove (*Zenaida macroura*). Suitable breeding habitat is absent, and foraging habitat is extremely sub-optimal. Therefore, these species were likely passing through the site in search of superior habitat, which is prevalent in the agricultural fields and irrigation basins in the vicinity.

The canal banks and piles of excavated dirt were inspected for burrowing owl and San Joaquin kit fox sign and suitable habitat. While canal banks and exposed pipes onsite may have once provided habitat for these species, all portions of the site are currently unsuitable for both of these species. All burrows of adequate size showed signs of recent disturbance associated with habitation of feral dogs.

The highly disturbed Project site and the continuous operation of heavy equipment would be considered baseline conditions, similar to those of surrounding lands which are intensively cultivated for agricultural production. The disturbed habitats of the Project site are unsuitable for any special status plant and/or animal species with potential to occur in the vicinity. Therefore, implementation of this Project should not result in an adverse effect to special status species or associated habitat. The only suitable nesting habitat includes the structures housing swallow nests over Mill Ditch. Potential impacts to nesting swallows can be easily mitigated by implementing a 50-foot construction-free buffer around active swallow nests during nesting season (February 1 through August 31).

In summary, no sensitive plant or animal species were observed during the biological survey on April 5, 2019. Typical habitat for special status species is absent, and the site is unsuitable due to frequent and ongoing ground disturbance. Nesting swallows should be avoided by implementing a 50-foot construction-free buffer during nesting season (as described above).

Attachments:

1. Selected Photographs of the Project Site
2. CNDDB 9-quad Query Results

Photograph 1: Overview of the Project site, showing current ground disturbance and overall conditions.

Photograph 2: Overview of the Project site, showing current ground disturbance and overall conditions.

Photograph 3: Active swallow nests on structure over Mill Ditch.

Photograph 4: Pack of feral dogs along Mill Ditch.

Appendix C

Cultural Resource Information

Cultural Resources Information
Adams and Academy Basin Project

Southern San Joaquin Valley Information Center, CSUB, California Historical Resources Information System: Record Search 19-093, dated March 26, 2019.

- There are no recorded cultural resources within the project area.
- There is one recorded resource within a half mile radius, P-10-005812, the Centerville Kingsburg Canal.

Native American Heritage Commission (NAHC): Sacred Lands File & Native American Contacts List Request, dated March 19, 2019.

- A Record Search of the NAHC Sacred Lands File was completed for the Area of Potential Effect (APE) with negative results
- A list of 13 tribes was provided, and letters to the 13 tribes were then mailed out March 20, 2019.
- One phone call was received from Mr. Woodrow of the Wuksache Indian Tribe/Eshom Valley Band requesting additional information regarding the location of the project and a copy of the Record Search. A Vicinity map and Record Search 19-093 were sent to the email address he provided on March 25th and April 1st, 2019.
- No additional responses or additional cultural information was received.

AB 52 Consultation pursuant to Public Resource Code Section 21080.3.1

- Consolidated Irrigation District has not received any letters from tribes regarding AB 52.
- Therefore no tribes were consulted on AB 52.

California
Historical
Resources
Information
System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Briza Sholars
Provost & Pritchard Consulting Group
286 W. Cromwell Ave.
Fresno, CA 93711

Record Search 19-093

Date: March 26, 2019

Re: Adams and Academy Basin

County: Fresno

Map(s): Sanger & Selma 7.5's

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within a small portion of the project area or within the one-half mile radius.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS

There are no recorded cultural resource within project area and it is not known if any exist there. There is one recorded resource within the one-half mile radius, P-10-005812. This resource is the Centerville-Kingsburg Canal.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of construction of a 50 acre basin that will reduce groundwater overdraft. Further, we understand the project area was previously used for agricultural purposes and is now fallow. Because no cultural resources study has been completed on this property, it is unknown if cultural resources are present. Therefore, prior to project activities, we recommend a survey of the project area be conducted by a qualified, professional consultant to determine if cultural resources are present. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Celeste M. Thomson, Coordinator **Date:** March 26, 2019

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

March 19, 2019

Briza Sholars
Provost & Pritchard Consulting

VIA Email to: bsholars@ppeng.com

RE: Adams and Academy Basin, Fresno County

Dear Ms. Sholars:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: katy.sanchez@nahc.ca.gov.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Environmental Planner

Attachment

Native American Heritage Commission
Native American Contacts List
3/19/2019

Big Sandy Rancheria of Western Mono Indians
Elizabeth D. Kipp, Chairperson
PO. Box 337
Auberry ,CA 93602
lkipp@bsrnation.com
(559) 374-0066
(559) 374-0055
Western Mono

Cold Springs Rancheria
Carol Bill, Chairperson
P.O. Box 209
Tollhouse ,CA 93667
coldsprgstribe@netptc.net
(559) 855-5043
(559) 855-4445 Fax
Mono

Dumna Wo-Wah Tribal Goverment
Robert Ledger Sr., Chairperson
2191 West Pico Ave.
Fresno ,CA 93705
ledgerrobert@ymail.com
(559) 540-6346
Dumna/Foothill Yokuts
Mono

Dunlap Band of Mono Indians
Benjamin Charley Jr., Tribal Chair
P.O. Box 14
Dunlap ,CA 93621
ben.charley@yahoo.com
(760) 258-5244
Mono

Dunlap Band of Mono Indians
Dick Charley, Tribal Secretary
5509 E. McKenzie Avenue
Fresno ,CA 93727
dcharley2016@gmail.com
(559) 554-5433
Mono

Kings River Choinumni Farm Tribe
Stan Alec
3515 East Fedora Avenue
Fresno ,CA 93726
(559) 647-3227 Cell
Foothill Yokuts
Choinumni

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road
Clovis ,CA 93619
rwgoode911@hotmail.com
(559) 299-3729 Home
(559) 355-1774 - cell
Mono

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P.O. Box 8
Lemoore ,CA 93245
(559) 924-1278
(559) 924-3583 Fax
Tache
Tachi
Yokut

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 822-2587
(559) 822-2693 Fax
Yokuts

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 325-0351
(559) 325-0394 Fax
Yokuts

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed: Adams and Academy Basin, Fresno County..

Native American Heritage Commission
Native American Contacts List
3/19/2019

Traditional Choinumni Tribe
David Alvarez, Chairperson
2415 E. Houston Avenue
Fresno ,CA 93720
davealvarez@sbcglobal.net
(559) 217-0396 Cell

Choinumni

Traditional Choinumni Tribe
Rick Osborne, Cultural Resources
2415 E. Houston Avenue
Fresno ,CA 93720
(559) 324-8764
lemek@att.net

Choinumni

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas ,CA 93906
kwood8934@aol.com
(831) 443-9702

Foothill Yokuts
Mono
Wuksache

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed: Adams and Academy Basin, Fresno County..

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Big Sandy Rancheria of Western Mono Indians
P.O. Box 337
Auberry, CA 93602

RE: Adams and Academy Basin Project

Dear Ms. Kipp:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Cold Springs Rancheria
P.O. Box 209
Tollhouse CA 93667

RE: Adams and Academy Basin Project

Dear Ms. Bill:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Dumna Wo-Wah Tribal Government
2191 West Pico Ave
Fresno CA 93705

RE: Adams and Academy Basin Project

Dear Mr. Ledger:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Dunlap Band of Mono Indians
P.O. Box 14
Dunlap CA 93621

RE: Adams and Academy Basin Project

Dear Mr. Charley:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Dunlap Band of Mono Indians
P.O. Box 14
Dunlap CA 93621

RE: Adams and Academy Basin Project

Dear Mr. Charley:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Kings River Choinumni Farm Tribe
3515 East Fedora Ave
Fresno CA, 93726

RE: Adams and Academy Basin Project

Dear Mr. Alec:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

North Fork Mono Tribe
13396 Tollhouse Road
Clovis CA 93619

RE: Adams and Academy Basin Project

Dear Mr. Goode:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Santa Rosa Rancheria Tachi Yokut Tribe
P.O. Box 8
Lemoore CA 93245

RE: Adams and Academy Basin Project

Dear Mr. Barrios:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Table Mountain Rancheria
P.O. Box 410
Friant CA 93626

RE: Adams and Academy Basin Project

Dear Ms. Walker-Grant:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Table Mountain Rancheria
P.O. Box 410
Friant CA 93626

RE: Adams and Academy Basin Project

Dear Mr. Pennell:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Traditional Choinumni Tribe
2415 E. Houston Ave
Fresno CA 93720

RE: Adams and Academy Basin Project

Dear Mr. Alvarez:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Traditional Choinumni Tribe
2415 E. Houston Ave
Fresno CA 93720

RE: Adams and Academy Basin Project

Dear Mr. Osbourne:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

EST. 1968
PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

March 20, 2019

Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas CA 93906

RE: Adams and Academy Basin Project

Dear Mr. Woodrow:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Consolidated Irrigation District Adams and Academy Basin Project.

Consolidated Irrigation District is proposing to construct a new approximately 50 acre basin that will reduce groundwater overdraft. This groundwater banking project is in the immediate proximity of two surface water supply canals: the Mill Ditch (or Selma Branch) and the Kingsburg Branch. The project would require a turnout structure to divert water from the C-K Canal, into a settlement channel that will settle out fines that could potentially plug the basin floors, into a distribution structure that would distribute water from the settlement channel and into the basins. Monitoring wells would be established to gage impacts from the project and determine if changes need to be made during operations of the project. A recovery well will provide for a way to extract water that has been stored by the project and deliver water to downstream users through CID's canals. The project is located near the intersection of Adams and Academy between Sanger and Parlier in Fresno County, CA. APN Nos. 353-030-59S, 353-030-07T, 353-030-58ST, 353-030-49MU, 353-030-06T, 353-030-65T.

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

Appendix D

NRCS Soil Resource Report

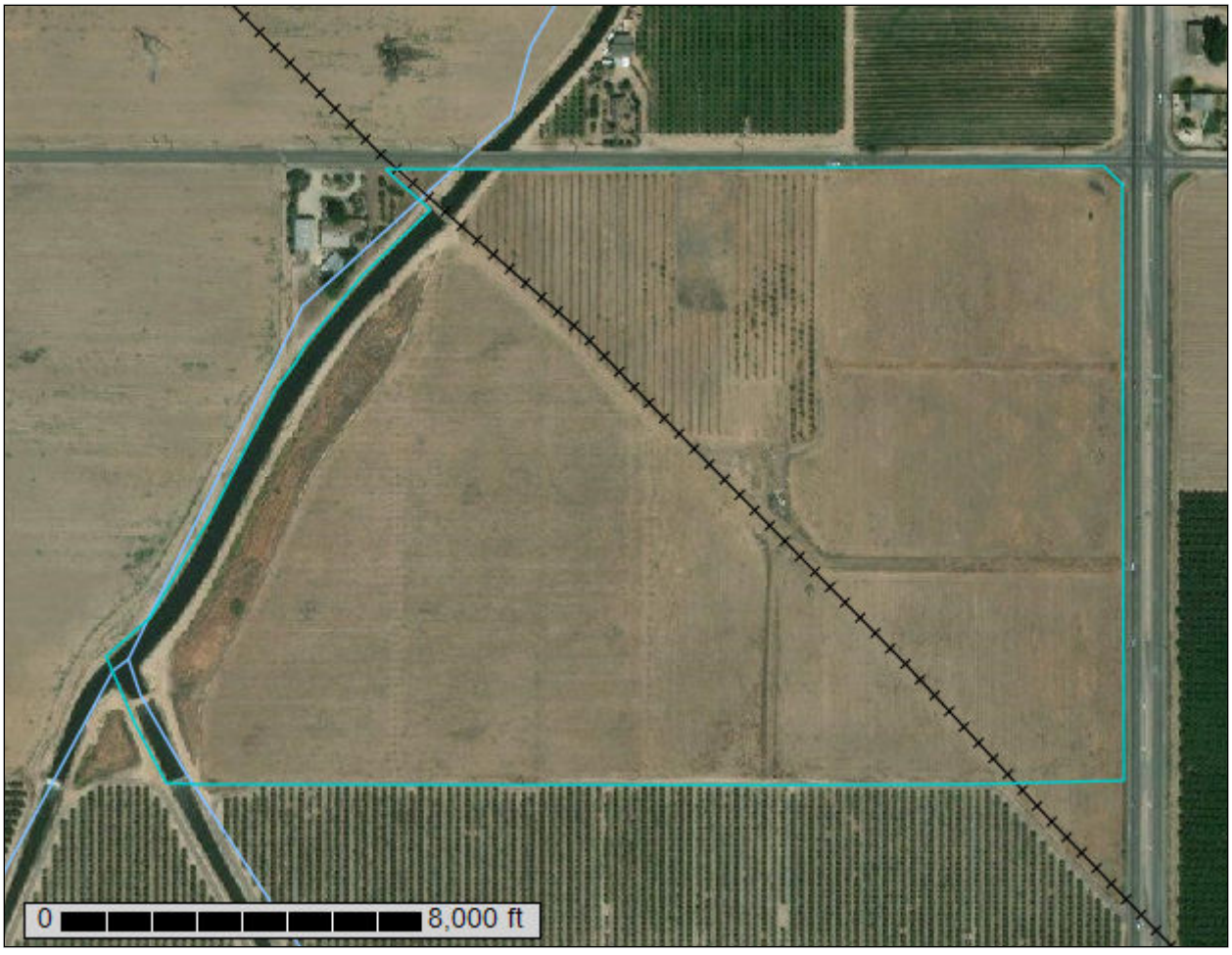
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eastern Fresno Area, California



March 18, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:3,670 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

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

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

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

Soil Survey Area: Eastern Fresno Area, California
Survey Area Data: Version 11, Sep 12, 2018

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

Date(s) aerial images were photographed: Jun 24, 2016—Oct 1, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DhA	Delhi loamy sand, 0 to 3 percent slopes, MLRA 17	19.7	34.2%
Dm	Dello loamy sand	1.7	3.0%
Hc	Hanford sandy loam	5.5	9.6%
Hm	Hanford fine sandy loam	15.0	26.1%
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	15.7	27.2%
Totals for Area of Interest		**57.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eastern Fresno Area, California

DhA—Delhi loamy sand, 0 to 3 percent slopes, MLRA 17

Map Unit Setting

National map unit symbol: 2ss8r
Elevation: 30 to 430 feet
Mean annual precipitation: 9 to 16 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 225 to 310 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Delhi and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Delhi

Setting

Landform: Dunes on fan remnants
Landform position (two-dimensional): Shoulder, toeslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from sandy alluvium derived from granite

Typical profile

A - 0 to 7 inches: loamy sand
C1 - 7 to 25 inches: loamy sand
C2 - 25 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hanford

Percent of map unit: 6 percent
Landform: Depressions on fan remnants

Hydric soil rating: No

Dello

Percent of map unit: 6 percent
Landform: Depressions on fan remnants
Hydric soil rating: Yes

Hilmar

Percent of map unit: 1 percent
Hydric soil rating: No

Dinuba

Percent of map unit: 1 percent
Hydric soil rating: No

Grangeville

Percent of map unit: 1 percent
Hydric soil rating: No

Dm—Dello loamy sand

Map Unit Setting

National map unit symbol: hl3k
Elevation: 160 to 400 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 225 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Dello and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dello

Setting

Landform: Depressions on flood plains, depressions on alluvial fans
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, rise
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Alluvium derived from granite

Typical profile

Ap - 0 to 8 inches: loamy sand
Cg1 - 8 to 36 inches: loamy sand
Cg2 - 36 to 60 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups
Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A
Hydric soil rating: Yes

Minor Components

Unnamed
Percent of map unit: 13 percent
Landform: Depressions on flood plains
Hydric soil rating: Yes

Unnamed, hummock
Percent of map unit: 2 percent
Landform: Hummocks on alluvial fans, levees on flood plains
Hydric soil rating: No

Hc—Hanford sandy loam

Map Unit Setting
National map unit symbol: hl5f
Elevation: 200 to 500 feet
Mean annual precipitation: 8 to 15 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 275 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting
Landform: Alluvial fans, flood plains
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, rise
Down-slope shape: Linear

Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile
Ap - 0 to 16 inches: sandy loam
C - 16 to 72 inches: sandy loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.8 inches)

Interpretive groups
Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Unnamed
Percent of map unit: 10 percent
Landform: Alluvial fans, flood plains
Hydric soil rating: No

Unnamed, channeled
Percent of map unit: 5 percent
Landform: Channels on alluvial fans
Hydric soil rating: No

Hm—Hanford fine sandy loam

Map Unit Setting
National map unit symbol: hl5p
Elevation: 200 to 500 feet
Mean annual precipitation: 8 to 15 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 275 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Alluvial fans, flood plains
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

A - 0 to 16 inches: fine sandy loam
C - 16 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Unnamed, loam

Percent of map unit: 10 percent
Landform: Flood plains
Hydric soil rating: No

Unnamed, steeper slopes

Percent of map unit: 4 percent
Landform: Benches
Hydric soil rating: No

Unnamed

Percent of map unit: 1 percent
Landform: Drainageways on flood plains
Hydric soil rating: Yes

TzbA—Tujunga loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: hlc1
Elevation: 180 to 400 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 62 to 64 degrees F
Frost-free period: 225 to 275 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Tujunga and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tujunga

Setting

Landform: Alluvial fans, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

A - 0 to 4 inches: loamy sand
C - 4 to 60 inches: stratified sand to loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Unnamed, loamy coarse sand

Percent of map unit: 12 percent
Landform: Flood plains, alluvial fans
Hydric soil rating: No

Unnamed, compact substratum

Percent of map unit: 2 percent
Landform: Flood plains, alluvial fans
Hydric soil rating: No

Unnamed, flooded

Percent of map unit: 1 percent
Landform: Flood plains
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf