COUNTY OF TULARE

RESOURCE MANAGEMENT AGENCY

5961 South Mooney Boulevard
Visalia, CA 93277

Rexford Solar Farm Project

Draft Environmental Impact Report
SCH# 2020020326

May 2020

Prepared by:

HDR

Prepared for:
County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

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Introduction

This Draft Environmental Impact Report (Draft EIR, DEIR, or EIR) concludes that the proposed Rexford Solar Farm Project ("Project" or "proposed Project") will result in ***No Significant Impacts*** on the environment.

The County of Tulare is considering approval of the proposed Rexford Solar Farm Project to allow the construction and operation of a 3,614-acre photovoltaic (PV) solar energy facility near the unincorporated community of Ducor. Power generated by the Project will be collected using up to 230 kilovolt collector lines which run overhead and/or underground to a dedicated Project substation and will then connect to the Southern California Edison (SCE) Vestal Substation via an overhead and/or underground generation tie-line.

The DEIR has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public and the Tulare County Planning Commission (and Tulare County Board of Supervisors) of the potential environmental impacts the proposed Project could have on resources as specified in the CEQA Guidelines. This DEIR, in its entirety, addresses and discloses potential environmental effects associated with construction-, operation-, and decommissioning-related activities of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfires
- Mandatory Findings of Significance

Although the Mandatory Findings of Significance is not a resource per se, it is required as it essentially provides a summary conclusion of the Project's potential on Long-Term Impacts; Cumulative Impacts; and Impacts to Species, Historical Resources, and on Human Beings. It is at this discussion where the EIR concludes that there will be no significant adverse environmental impacts as a result of this Project.

CEQA requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public disclosure document designed to provide local and state governmental agency decision makers with an objective analysis of potential environmental consequences to support informed decision-making. This DEIR (State of California Clearinghouse #202002036) has been prepared by Tulare County in accordance with CEQA Guidelines Sections 15120 through 15131 and Section15161 regulating EIRs to: i) evaluate the environmental consequences of the Project, ii) to discuss alternatives to the proposed Project, and iii) to propose mitigation measures that will offset, minimize or avoid identified significant environmental impacts. This document focuses on issues determined to be potentially significant during the public scoping process completed for this Project, as well as comments received on the Notice of Preparation (NOP) circulated by Tulare County in February 2020. Pursuant to CEQA Guidelines Section 15082, the NOP for the proposed Project was circulated for review and comment on February 14, 2020, and circulated for a 30-day comment period ending March 16, 2020. A Scoping Meeting was duly noticed and held on March 5, 2020, during the NOP comment period, at Tulare County RMA Main Conference Room at 5961 South Mooney Boulevard, Visalia, CA to solicit input on the scope of the EIR. No written comments were received during this meeting (see Appendix “L” of this DEIR).

Proposed Project

Project Location

The Project site encompasses approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. Neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies both east and west of State Route (SR) 65.

Project Description

The proposed Project involves the construction and operation of an up to 700 megawatt (MW) solar photovoltaic (PV) facility, including an energy storage system (ESS) with up to 700 MW storage capacity, on-site substation, transmission and/or collector lines, and ancillary components on approximately 3,614 acres of land historically used as agricultural farmland in unincorporated Tulare County, California.

The proposed Project will include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, energy storage system (ESS), access roads and fencing, and on-site substation. An operations and maintenance (O&M) building may be constructed on the site.

The proposed Project may share O&M, substation, ESS, and/or transmission facilities with one or more nearby or future projects. Any lands not used for O&M, substation, ESS, and/or transmission facility areas on the Project site could instead be used by solar panels under such scenarios.

The proposed Project will involve the construction of both transmission and collector lines. Power generated by the proposed Project will be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line. A franchise and/or encroachment agreement along public roads may ultimately be required for portions of the transmission and/or collector line. The

transmission and/or collector lines will be located along portions of Road 232, Avenue 56, Avenue 64, Road 224, Road 240, Avenue 32, Richgrove Drive, and SR 65, or could possibly utilize additional nearby routings. The total length of the transmission and/or collector lines will be approximately 13 miles in length.

Construction

The construction period for the proposed Project, from site preparation through construction, testing, and commercial operation, is expected to commence as early as Q4 2021 and could encompass approximately 12 to 24 months.

Construction of the facility will include the following activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Collector line installation
- Architecture and landscaping

Operations and Maintenance

Once the Project is constructed, maintenance will generally be limited to the following: cleaning of PV panels, monitoring electricity generation, providing site security, and facility maintenance (replacing or repairing inverters, wiring, and PV modules).

It is anticipated that the proposed Project will require an operational staff of up to 20 full-time employees. As previously discussed, it is possible that the proposed Project may share O&M, substation, ESS, and/or transmission facilities with one or more nearby or future projects. In such a scenario, the projects would share personnel, thereby potentially reducing the Project's on-site staff.

The facility will operate seven days a week, 24 hours a day. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available.

Facility Decommissioning

The Project proponent anticipates selling the renewable energy produced by the Project under the terms of a long-term Power Purchase Agreement (PPA) or directly into the wholesale market. The life of the solar facility is anticipated to be up to 35 years; however, the Project proponent may, at its discretion (and with approval by Tulare County), choose to extend the life of the facility, update technology and re-commission, or decommission and remove the system and its components. If, and when, a decommissioning event occurs, the solar site w be reclaimed as required by a County approved Decommissioning and Reclamation Plan (and attendant bond). This Reclamation Plan will provide financial assurances along with a detailed plan to remediate soils and return the land to its original pre-construction condition upon termination of the Project. At the time of re-use, the zoning/land use designations will be used to determine the Project site's highest and best use.

If, and when, Project decommissioning occurs, Project structures will be removed from the Project site. Above-ground equipment that would be removed include module posts and support structures, onsite transmission poles that are not shared with third parties and the overhead collection system within the Project site, inverters, transformers, energy storage equipment, electrical wiring, equipment on the inverter pads, and related equipment and concrete pads. The substation would be removed if it is owned as part of the Project; however, if a public or private utility assumes ownership of the substation, the substation may remain on-site to be used as part of the utility service to supply other applications. Project roads will be restored as close as feasible to pre-construction conditions (unless the landowner elects to retain the improved roads within the property). The area would be thoroughly cleaned and all debris removed. Most materials would be recycled to the extent feasible and consistent with applicable federal, state, and local requirements, while the balance of material would be disposed in landfills in compliance also with all applicable requirements. A collection and recycling program would be implemented in the event system components are manufactured with hazardous materials.

All decommissioning- and restoration-related activities, as contained in the County approved Decommissioning and Reclamation Plan, would adhere to the requirements of the appropriate governing authorities and in accordance with all applicable federal, state, and county regulations.

When the Project ceases operation, the facilities would be decommissioned and dismantled, and the Project site restored to a condition suitable for agricultural use (or other use as allowed by zoning/land use designations at the time of decommissioning). Decommissioning-related activities of the Project site would take approximately 4-6 months and would comprise removal of above-ground and below-ground (subsurface) structures; and site reclamation (including restoration of topsoil, revegetation, and seeding).

Project Objectives

- Construct and operate a solar energy facility capable of producing up to 700 MW AC of electricity and/or 700 MW AC of energy storage to assist the State of California in achieving its 50 percent renewable portfolio standard by 2030;
- To provide energy to the electric grid to meet increasing demand for in-state generation;
- To facilitate enhanced grid operation by constructing and operating a solar energy generation facility coupled with energy storage system;
- Integrate operating facilities with the existing Vestal substation to connect power generated by the Project into the electricity grid;
- Interconnect directly to the Southern California Edison (SCE) electrical transmission system;
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases (GHGs);
- Help reduce reliance on foreign sources of fuel;
- Supply on-peak power to the electrical grid in California;
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006);
- Provide an investment in California and Tulare County that would create jobs and other economic benefits;

- Support and implement the efforts made by the County of Tulare to address climate change through its General Plan and Climate Action Plan;
- Minimize environmental impacts by locating in a suitable rural setting near existing power grid connections lines; and.
- Minimize environmental impacts by locating the facility in a remote location.

Summary of Chapters

Chapter 1 Introduction

The County of Tulare is considering approval of the proposed Rexford Solar Farm Project to allow the construction and operation of a 3,614-acre photovoltaic (PV) solar energy facility near the unincorporated community of Ducor. Power generated by the Project will be collected using up to 230 kilovolt collector lines which run overhead and/or underground to a dedicated Project substation and will then connect to the Southern California Edison (SCE) Vestal Substation via an overhead and/or underground generation tie-line.

Local Regulatory Context: The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan, an EIR and background report were prepared. The General Plan background report contained contextual environmental analysis for the General Plan. The 2015 -2023 Tulare County Housing Element was adopted on November 17, 2015, and certified by State of California Department of Housing and Community Development on December 9, 2015.

Identification of Potentially Significant Impacts: Indicates that the EIR must identify potentially significant impacts consistent with CEQA Guidelines Section 15002 (h).

Consideration of Significant Impacts: Indicates that the EIR must consider significant impacts consistent with CEQA Guidelines Section 15126.2.

Mitigation Measures: Indicates that the EIR is required to contain mitigation measures consistent with CEQA Guidelines Section 15126.4.

Environmental Review Process: Summarizes steps taken prior to release of the DEIR such as the Notice of Preparation, Scoping Meeting, and comments received from persons and/or agencies in response to the Notice of Preparation.

Chapter 2 Project Description, Objectives, and Environmental Setting

In summary, Chapter 2 contains the following:

- **Project Location:** The Project site encompasses approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. Neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route (SR) 65, although some areas of the Project lie west of SR 65.
- **Project Objectives:** See pages ES-4 and ES-5, or Chapter 2, page 2-4.

- **Project Description (baseline conditions information pertinent to the proposed Project):** Describes the existing land use and improvements proposed with the solar energy facility.

Chapter 3 Impact Analysis of Resources

The CEQA Guidelines include a Checklist of resources that must be addressed in an EIR. These resources are listed on page ES-1. There are 20 specific Resources and Mandatory Findings of Significance discussed in detail in Chapter 3. The Resources are discussed in separate sections of Chapter 3 and each section is structured as follows:

- Summary of Findings;
- Introduction, including Thresholds of Significance;
- Environmental Settings;
- Existing Conditions;
- Regulatory Settings such as applicable Federal, State, and Local laws, statues, rules, regulations, and policies;
- Impact Evaluation including Project Impacts, Cumulative Impacts, Mitigation Measures, and Conclusions;

Some resources required expertise to evaluate the Project's potential for impacts. As such, qualified experts prepared studies, evaluations, assessments, modeling, search results, etc. (studies/technical memoranda/search results; i.e.; supporting documents) to quantify and/or qualify potential resource impacts. The supporting documents are contained in Appendices "A" through "L":

- Appendix "A" - *"Rexford Photovoltaic Solar Farms Aesthetics Study"*
- Appendix "B"- Tulare County Board of Supervisors Adopted Resolutions, Agricultural Zone Land Uses
- Appendix "C" - *"Rexford Solar Farm Project Air Quality and Greenhouse Gas Study"*
- Appendix "D" - Biological Resources
  - *"Rexford Solar Farm Project Biological Resources Assessment"*
  - *"Rexford Solar Farm Project Aquatic Resources Assessment"*
- Appendix "E"- *"Rexford Solar Farm Project Cultural Resources Assessment Report"*
- Appendix "F"- *"CEQA Level Geotechnical Study – Tulare County, California"*
- Appendix "G" - *"Phase I Environmental Site Assessment – Rexford Solar Farm – Tulare County, California"*
- Appendix "H" - *"Rexford Solar Project Stormwater Analysis Memorandum"*
- Appendix "I" - *"Rexford Solar Farm Project Noise Study"*
- Appendix "J" - *"Rexford Solar Farm Project Traffic Impact Analysis – Tulare County"*
- Appendix "K" - *"Rexford Solar Project Water Supply Assessment"*
- Appendix "L"- CEQA Notices

Chapter 4 Summary of Cumulative Impacts

A critically important component of an EIR is the Cumulative Impacts discussion. Chapter 4 discusses a Cumulative Impact Analysis under CEQA. Including Past, Present, Probable Future Projects; and a Summary of Cumulative Impacts. Whereas a project in and of itself may not result in an adverse environmental impact, its cumulative effects may. Therefore, the CEQA Guidelines require a discussion of cumulative impacts per Section 15130. The Discussion of Cumulative Impacts defines cumulative impacts per Section 15355 - "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

The Summary of Cumulative Impacts section discusses mitigable and immitigable impacts. Checklist Item criteria that would result in no impacts or less than significant impacts are discussed in Chapter 3 and are not reiterated in Chapter 5. As noted in Chapter 4, there are no Significant and Unavoidable Impacts; and Less Than Significant Impacts With Mitigation are summarized in **Table 4-2** (Checklist Items with Less than Significant with Mitigation). There are a number of cumulative impacts that do not need mitigation; these impacts are listed in **Table 4-3** (Checklist Items with Less Than Significant Impacts).

Chapter 5 Alternatives

CEQA Guidelines Section 15126.6 requires that a reasonable range of Alternatives to the proposed Project be discussed in the EIR. The proposed Project site is the superior alternative. The conclusion contained in Chapter 5 is based on the criteria established for the site and the three reasonable Alternatives. The three Alternatives evaluated are:

- Alternative 1 – No Project Alternative
- Alternative 2 – Reduced Project Site – Setback from White River
- Alternative 3 – Reduced Project Site – Avoid Isolated Seasonal Wetlands

The proposed Alternatives were analyzed based on five evaluation criteria which include each of the objectives of the Project and the assessment of the potential environmental impacts. **Table 5-1** provides a qualitative comparison of the impacts for each alternative compared to the proposed Project. As shown in **Table 5-1**, the No Project Alternative would be considered the environmentally superior alternative, since it would avoid all potential construction-and operations-related impacts related to the proposed Project. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

The environmentally superior alternative would be Alternative 2. As shown in **Table 5-1**, Alternative 2 would have less impacts on the following resource areas compared to the proposed Project: biological resources, cultural resources, and tribal cultural resources.

Chapter 6 Economic, Social, & Growth Inducing Impacts

This Chapter discusses the Economic, Social, and Growth Inducing effects of the Project. It contains **Table 6-1** which provides the CEQA requirements and a summary of the impact analysis as follows:

- Economic Effects - The proposed Project will not result in an adverse impact to the region. It will result in increases in economic benefits as the Project is anticipated to provide up to 20 permanent jobs.
- Social Impacts - The proposed Project will not result in disproportionate environmental effects on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.
- Growth Inducing Effects - The proposed Project will not result in significant growth inducing impacts. The proposed Project will result in the creation of temporary construction jobs and approximately 20 permanent jobs, which is not considered to be an employment base at such a level as to create growth inducing impacts. The Project does not involve the construction of new housing. Growth inducing impacts will be less than significant.

The overall conclusion contained in Chapter 6 is implementation of the proposed Project will result in ***Less Than Significant*** environmental impacts, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

Chapter 7 Immitigable Impacts

This discussion provides determinations consistent with CEQA Guidelines Sections 15126.2 (b) Environmental Effects That Cannot Be Avoided, 15126.2 (c) Irreversible Impacts, and Statement of Overriding Considerations.

The Project will not result in significant and unavoidable impacts. All impacts have been found to be less than significant, or have been mitigated to a level considered less than significant. Based on the analysis contained in the Environmental Impacts That Cannot Be Avoided and the Irreversible Impact sections contained in Chapter 7, a Statement of Overriding Considerations is not necessary. The Project's merits and objectives are discussed in the Project Description and are found to be consistent with the intent of the County of Tulare and its 2030 General Plan.

Chapter 8 Mitigation Monitoring and Reporting Program

A summary of the Mitigation Monitoring and Reporting Program is contained at the end of this Executive Summary (**Table ES-1**) and in its entirety in Chapter 8. CEQA Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment. The mitigation monitoring and reporting program is required to ensure compliance during a Project's implementation. Consistent with CEQA requirements, the Mitigation Monitoring and Reporting Program contained in this EIR includes the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.

- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Chapter 9 EIR Preparation

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified.

The sitting Tulare County Board of Supervisors, Tulare County Planning Commission, Tulare County Resource Management Agency RMA Director (Reed Schenke), Associate RMA Director (Michael Washam), Assistant RMA Director Economic Development and Planning (Aaron Bock), Chief Environmental Planner (Hector Guerra), and Planner IV (Jessica Willis) are noted.

The EIR also relied on the expertise of the following:

Aztec

- Aesthetics Study – "Rexford Photovoltaic Solar Farms Aesthetics Study" (Appendix "A" of this EIR)

Rincon Consultants, Inc.

- Air Quality and Greenhouse Gas Study – *"Rexford Solar Farm Project Air Quality and Greenhouse Gas Study"* (Appendix "C" of this EIR)
- Aquatic Resources Assessment – "Rexford Solar Farm Project Aquatic Resources Assessment" (Appendix "D" of this EIR)
- Biological Resources Assessment – *"Rexford Solar Farm Project Biological Resources Assessment"* (Appendix "D" of this EIR)
- Cultural Resources Assessment – "Rexford Solar Farm Project Cultural Resources Assessment Report" (Appendix "E" of this EIR)
- Noise Study – "Rexford Solar Farm Project Noise Study" (Appendix "I" of this EIR)
- Water Supply Assessment – *"Rexford Solar Project Water Supply Assessment"* (Appendix "K" of this EIR)

Stantec Consulting Services, Inc.

- Geotechnical Study – "CEQA Level Geotechnical Study – Tulare County, California" (Appendix "F" of this EIR)
- Traffic Impact Analysis – "Rexford Solar Farm Project Traffic Impact Analysis – Tulare County" (Appendix "J" of this EIR)

Technicon Engineering Services, Inc.

- Phase I ESA – *"Phase I Environmental Site Assessment – Rexford Solar Farm – Tulare County, California"* (Appendix "G" of this EIR)

Westwood Professional Services

- Stormwater Analysis – *"Rexford Solar Project Stormwater Analysis Memorandum"* (Appendix "H" of this EIR)

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
Biological Resources		
3.4 a)	**3.4-1. San Joaquin Adobe Sunburst.** A pre-construction survey for San Joaquin Adobe Sunburst within fallow agricultural fields and vegetation surrounding isolated wetlands within the Project site will be conducted by a qualified botanist during its blooming period (February- April) following CDFW and USFWS special-status plant survey guidelines to determine if populations are present. If detected, San Joaquin adobe sunburst locations within the Project site will be flagged, and a 150-foot avoidance buffer established. If avoidance is not feasible, consultation with USFWS and CDFW to determine compensatory mitigation measures would occur before construction-related activity could continue.	Less than Significant
3.4 a)	**3.4-2. San Joaquin Kit Fox.** A pre-construction clearance survey for San Joaquin kit fox shall be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas shall include the entire Project site and all undeveloped habitat within 200 feet. If no potential dens are located, construction-related activity may proceed. If a potential den is located, an infrared camera trap shall be placed at the den entrance for three days to confirm species occupancy. If San Joaquin kit fox use is observed, the den shall be avoided and the USFWS shall be contacted. Construction-related activities shall adhere to the avoidance and minimization measures outlined in the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), outlined below: 3.4-2. a. Project-related vehicles shall observe a 20-mph speed limit in all Project areas, except on County roads and State and Federal highways; this is particularly important at night when kit fox are most active. To the extent possible, night-time construction-related activity shall be minimized. Off-road traffic outside of designated Project areas shall be prohibited. 3.4-2.b. To prevent inadvertent entrapment of kit fox or other animals during the construction-related activity phase of the Project, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials or provided with one (1) or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS shall be notified within three days of the discovery. 3.4-2.c. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction-related activity or Project site. 3.4-2.d. No firearms or pets shall be allowed on the Project site. 3.4-2.e. Use of rodenticides and herbicides in Project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit fox and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection	Less than Significant

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
	Agency, California Department of Food and Agriculture, California Department of Pesticide Regulation, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFW Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.	
3.4 a)	**3.4-3. Worker Environmental Awareness Program.** Prior to the issuance of grading or building permits, and for the duration of construction-related activities, all new construction workers at the Project site shall attend a Worker Environmental Awareness Program (WEAP), developed and presented by the Project Lead Biologist. The WEAP shall be presented by the Lead Biologist and shall include information on the life history of each federal and state-listed species, as well as other special-status wildlife, natural communities, and plant species that may be encountered during construction-related activities, their legal protections, the definition of "take" under the federal and state endangered species acts, measures the Project operator is implementing to protect special-status species, reporting requirements, specific measures that each worker shall employ to avoid take of special-status wildlife species, and penalties for violation of the Federal Endangered Species Act and California Endangered Species Act. A fact sheet conveying this information shall be prepared for distribution to contractors, employees, and anyone else who may enter the Project site. WEAP training shall be documented as follows: 3.4-3a. An acknowledgement form signed by each worker indicating that environmental training has been completed. 3.4-3b. A sticker that shall be placed on hard hats indicating that the worker has completed the environmental training. Construction workers shall not be permitted to operate equipment within the construction area unless they have attended the training and are wearing hard hats with the required sticker. 3.4-3c. A copy of the training transcript/training video and/or training video, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgements forms shall be submitted to the Tulare County Resource Management Agency.	Less than Significant
3.4 a)	**3.4-4. Burrowing Owl.** A preconstruction clearance survey for burrowing owls (BUOW) shall be conducted by a qualified biologist no less than 14 days prior to the start of construction-related activities in accordance with the protocols adopted by the CDFW *Staff Report on Burrowing Owl Mitigation* (2012). If BUOW are observed on-site or within 500 feet of the site, the following avoidance and minimization measures shall be implemented:	Less than Significant

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
	3.4-4.a. A no-disturbance buffer shall be established around occupied burrows. The buffer size may range from 150 feet to 650 feet depending on the time of year and the level of construction-related activity (refer to CDFW 2012). 3.4-4.b. A qualified biologist shall monitor the nest to ensure construction-related activities will not adversely impact the nesting birds and determine when the burrow is no longer occupied. 3.4-4.c. If construction-related activities cannot avoid the active BUOW nest, CDFW shall be consulted regarding passive eviction and mitigation. If necessary, BUOW may be passively relocated from burrows after an exclusion plan is prepared and approved by the CDFW.	
3.4 a)	**3.4-5. Raptors and Nesting Birds.** To avoid impacts to nesting birds including Swainson's hawk and raptorial species protected by Sections 3503, 3503.5, and 3513 of the CFGC, activities related to the Project including, but not limited to, vegetation removal, ground disturbance, and construction- and demolition-related activity, shall occur outside of the bird breeding season (February 1 through August 30 for nesting birds; March 1 through September 31 for Swainson's hawk; but variable based on seasonal and annual climatic conditions). Construction-related activity commencing outside of the nesting season does not require any mitigation. If construction-related activities are scheduled to commence during the breeding season, the following mitigation and avoidance measures will be implemented: 3.4-5.a. A pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal. The survey shall be conducted within the Project site and include a 150-foot buffer for passerines, 500-foot buffer for other raptors, and 0.5-mile buffer for active Swainson's hawk nests. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the region. 3.4-5.b. If nests are found, an appropriate avoidance buffer will be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. For Swainson's hawk nests, an avoidance buffer of up to ½ mile shall be established by a qualified biologist based on the nest location in relation to the Project activity, the line-of-sight from the nest to the Project activity, and observed hawk behavior at the nest. 3.4-5.c. If this buffer is not feasible, or if the Project intends to reduce the buffers based on the previously listed criteria, consultation with CDFW is warranted to discuss how these criteria will be implemented and determine if the Project will avoid take.	Less than Significant

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
	3.4-5.d. All construction-related personnel shall be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No ground disturbing activities shall occur within the buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist. 3.4-5.e. If take cannot be avoided, take authorization through the issuance of an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081(b) is necessary to comply with the California Endangered Species Act.	
3.4 a)	**3.4-6. Vernal Pool Fairy Shrimp.** To avoid impacts to vernal pool fairy shrimp, the energy generation portions of the Project will be designed and constructed to avoid all mapped potential vernal pool fairy shrimp (VPFS) habitat by 250 feet. Project work that involves rough grading and clearing and grubbing outside of existing roadways and associated right of way, installation of solar arrays and associated facilities, construction staging, and site access, will occur at least 250 feet from potential vernal pool fairy shrimp habitat. 3.4-6.a. If vernal pool fairy shrimp habitat cannot be avoided, the applicant shall provide evidence to the Tulare County Resource Management Agency that a Section 2081 ITP from CDFW for vernal pool fairy shrimp (if determined to be required) has been obtained. If it is determined that an ITP is not required, the Project developer/operator shall provide a letter describing the consultation process and wildlife agency determination, indicating that an ITP is not required. The letter shall also identify the CDFW point of contact and contact information.	Less than Significant
3.4 a)	**3.4-7. Elderberry Shrubs.** The Project will be designed to avoid impacts to all mapped elderberry shrub. Prior to construction-related activity, a qualified biologist will identify and flag all individual elderberry shrubs within the Project site during a pre-construction survey. Temporary plastic mesh–type construction fence will be installed at least 20 feet from the driplines of elderberry shrubs adjacent to the Project site to prevent encroachment by construction-related vehicles and personnel.	Less than Significant
3.4 c)	**3.4-8. Jurisdictional Waters.** Potentially jurisdictional features should be demarcated with fencing and avoided. If these features cannot be avoided, a jurisdictional wetland delineation shall be conducted to identify and delineate the jurisdictional extent. Permitting by the RWQCB, and/or CDFW may be required, depending on the jurisdictional scope of each feature. Mitigation for fill would be at 1:1 (one (1) acre of mitigation for each acre of impact) at a minimum. Additional mitigation may be required under agency permits.	Less than Significant
Cultural Resources and Tribal Cultural Resources		
3.5 a), b) **3.18 a), b)**	**3.5-1.** In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the portion of the Project site where the resource is discovered, be	Less than Significant

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
	immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the specialists shall provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recovery, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.	
3.5 c) **3.18 a), b)**	**3.5-2.** Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or	Less than Significant

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
	c. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.	
Public Services		
3.15 a)	**3.15-1**. Applicant shall provide an access road to the site and any facilities affected by the Special Use Permit.	Less than Significant
3.15 a)	**3.15-2.** Applicant shall submit plans for all new construction, and shall comply with the provisions of the 2019 Cal Green Building Code, Fire Code, Mechanical Code, Electric Code and Plumbing Code, as applicable.	Less than Significant
3.15 a)	**3.15-3.** The Tulare County Fire Department shall be notified of the proposed start date of any processing, storage, or special use granted and mitigated prior to initiation of any building operations.	Less than Significant
3.15 a)	**3.15-4.** Violations of any of these conditions shall result in Tulare County Fire Department's rescission of approval of the Special Use Permit.	Less than Significant
3.15 a)	**3.15-5.** Fire Department requires a Knox box to be installed at an approved location to permit entry to the site.	Less than Significant
3.15 a)	**3.15-6.** Access gate shall be set back 30 feet from the roadway for fire apparatus access.	Less than Significant
3.15 a)	**3.15-7.** All combustible vegetation shall be removed from the site and Tulare County Fire Department approved measures taken to prevent the accumulation of the combustible vegetation that would create a fire hazard.	Less than Significant
3.15 a)	**3.15-8.** Access roads shall be provided so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department.	Less than Significant
3.15 a)	**3.15-9.** Access roads shall be a minimum of 20 feet in width (non-obstructed), with a maintained 13 feet 5 inches vertical clearance.	Less than Significant

Table ES-1. Summary of Mitigation Measures

Checklist Item	Mitigation Measure	Impact after Mitigation
3.15 a)	**3.15-10.** 20-foot fire access roads shall be constructed so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department.	Less than Significant
3.15 a)	**3.15-11.** Applicant shall be responsible for training fire personnel of facility operations, hazards and emergency procedures for shutting down the operation.	Less than Significant
3.15 a)	**3.15-12.** Posted address shall be visible from roadway, minimum 4-inch numbers.	Less than Significant
3.15 a)	**3.15-13.** If buildings are proposed, National Fire Protection Agency (NFPA) 1142 standards for rural water supplies shall be required.	Less than Significant

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1 Introduction

1.1 Project Summary

The County of Tulare is considering approval of the proposed Rexford Solar Farm Project to allow the construction and operation of a 3,614-acre photovoltaic (PV) solar energy facility near the unincorporated community of Ducor. Power generated by the Project will be collected using up to 230 kilovolt collector lines which run overhead and/or underground to a dedicated Project substation and will then connect to the Southern California Edison (SCE) Vestal Substation via an overhead and/or underground generation tie-line.

1.2 Local Regulatory Context

The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan, an EIR, and an accompanying Background Report were also prepared. The General Plan Background Report contained contextual environmental analysis for the General Plan Update. The Housing Element for 2009-2014 was adopted on May 8, 2012, and certified by the State of California Department of Housing and Community Development on June 1, 2012. The Health and Safety Element was amended November 15, 2016, under GPA 16-004.

1.3 Scope and Methodology

The County of Tulare has determined that a project level EIR fulfills the requirements of CEQA and is the appropriate level evaluation to address the potential environmental impacts of the proposed Project. A project level EIR is described in Section 15161 of the State CEQA Guidelines as one that examines the environmental impacts of a specific development project. A project level EIR must examine all phases of the project, including planning, construction, and operation.

This document addresses environmental impacts to the level that they can assessed without undue speculation (CEQA Guidelines Section 15145). The degree of specificity in an EIR corresponds to the degree of specificity of the underlying activity being evaluated (CEQA Guidelines Section 15146). Also, the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project (CEQA Guidelines Sections 15151 and 15204(a)).

CEQA Guidelines Section 15002(a) specifies that, “[t]he basic purposes of CEQA are to:

(1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.

(2) Identify ways that environmental damage can be avoided or significantly reduced.

(3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

(4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved."[1]

CEQA Guidelines Section 15002(f) specifies that, "[a]n environmental impact report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage… An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment… When the agency finds that there is no substantial evidence that a project may have a significant environmental effect, the agency will prepare a "Negative Declaration" instead of an EIR…"[2]

Pursuant to CEQA Guidelines Section 15021 Duty to Minimize Environmental Damage and Balance Competing Public Objectives:

"(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.

(1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.

(2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

(b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

(c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.

(d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment."[3]

[1] CEQA Guidelines, Section 15002(a).

[2] Ibid. Section 15002(f).

[3] Op. Cit. Section 15021.

1.4 Identification of Potentially Significant Impacts

CEQA Guidelines Section 15002(h) addresses potentially significant impacts, to wit, "CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project could cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods:

(1) Changing a proposed project;

(2) Imposing conditions on the approval of the project;

(3) Adopting plans or ordinances to control a broader class of projects to avoid the adverse changes;

(4) Choosing an alternative way of meeting the same need;

(5) Disapproving the project;

(6) Finding that changing or altering the project is not feasible; and,

(7) Finding that the unavoidable significant environmental damage is acceptable as provided in Section 15093."[4] (See Chapter 7)

This *Draft EIR* identifies potentially significant impacts that will be anticipated to result from implementation of the proposed Project. Significant impacts are defined as a "substantial or potentially substantial, adverse change in the environment."[5] Significant impacts must be determined by applying explicit significance criteria to compare the future plan conditions to the existing environmental setting.[6]

The existing setting is described in detail in each resource section of Chapter 3 of this document and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are also included in each resource section in Chapter 3 of this document.

1.5 Consideration of Significant Impacts

Pursuant to CEQA Guidelines Section 15126.2, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant

[4] Op. Cit. Section 15002(h).

[5] Public Resources Code Section 21068.

[6] CEQA Guidelines, Section 15126.2(a).

environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected."[7]

1.6 Mitigation Measures

CEQA Guidelines Section 15126.4 specifies that:

"(1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.

(A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR.

(B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures shall not be deferred until some future time. The specific details of a mitigation measure, however, may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards.

(C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix "F."

(D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986.)

(2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.

(3) Mitigation measures are not required for effects which are not found to be significant.

[7] Op. Cit. Section 15126.2.

(4) Mitigation measures must be consistent with all applicable constitutional requirements, including the following:

(A) There must be an essential nexus (i.e., connection) between the mitigation measure and a legitimate governmental interest. *Nolan v. California Coastal Commission*, 483 U.S. 825 (1987); and

(B) The mitigation measure must be "roughly proportional" to the impacts of the project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measures in an ad hoc exaction, it must be "roughly proportional" to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal. 4th 854.

(5) If the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency's determination."[8]

1.7 Organization of the EIR

Executive Summary

The Executive Summary Chapter provides a summary of the proposed Project, including a summary of Project impacts, mitigation measures, and Project alternatives.

Chapter 1

Chapter 1 provides a brief introduction to the Environmental Analysis required by CEQA.

Chapter 2

Chapter 2 describes the proposed Project. The chapter also includes the objectives of the proposed Project. The environmental setting is described and the regulatory context within which the proposed Project is evaluated is outlined.

Chapter 3

Includes the Environmental Analysis in response to each Checklist Item. Within each analysis the following is included:

Summary of Findings

Each chapter notes a summary of findings.

Introduction

Each chapter will begin with a summary of impacts, pertinent CEQA requirements, applicable definitions and/or acronyms, and thresholds of significance.

Environmental Setting

Each environmental factor analysis in Chapter 3 will outline the environmental setting for each environmental factor. In addition, methodology is explained when complex analysis is required.

Existing Conditions

Each environmental factor analysis in Chapter 3 will outline the existing conditions for each environmental factor.

[8] Op. Cit. Section 15126.4.

Regulatory Setting

Each environmental analysis topic in Chapter 3 will outline the regulatory setting for that resource.

Project Impact Analysis

Each evaluation criteria will be reviewed for potential Project-specific impacts.

Cumulative Impact Analysis

Each evaluation criteria will be reviewed for potential cumulative impacts.

Mitigation Measures

Mitigation Measures will be proposed as deemed applicable.

Conclusion

Each conclusion will outline whether recommended mitigation measures will, based on the impact evaluation criteria, substantially reduce or eliminate potentially significant environmental impacts. If impacts cannot be mitigated, unavoidable significant impacts will be identified.

Chapter 4

Chapter 4 summarizes the cumulative impacts addressed in Chapter 3.

Chapter 5

Chapter 5 describes and evaluates alternatives to the proposed Project. The proposed Project is compared to each alternative, and the potential environmental impacts of each are analyzed.

Chapter 6

Chapter 6 evaluates or describes CEQA-required subject areas: Economic Effects, Social Effects, and Growth Inducement.

Chapter 7

Chapter 7 evaluates or describes CEQA-required subject areas: Environmental Effects That Cannot be Avoided, Irreversible Impacts, and Statement of Overriding Considerations.

Chapter 8

Chapter 8 provides a mitigation monitoring and reporting program that summarizes the environmental issues, the significant mitigation measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

Chapter 9

Chapter 9 lists all the individuals and companies involved in the preparation of the EIR, as well as individuals and agencies consulted and cited in the EIR.

Technical Appendices

Following the text of this *Draft EIR*, several appendices and technical studies have been included as reference material.

1.8 Environmental Review Process

Pursuant to CEQA Guidelines §15082, the Notice of Preparation (NOP) for the proposed Project was circulated for review and comment on February 14, 2020 and circulated for a 30-day comment period ending March 16, 2020. Tulare County RMA received (7) seven comment letters on the NOP. Comments were received from the following agencies, individuals, and/or organizations:

- Native American Heritage Commission
- Santa Rosa Rancheria
- State of California Department of Toxic Substances Control
- State of California Department of Transportation
- State of California Department of Fish and Wildlife
- Tule River Tribe
- Tulare County Farm Bureau

A copy of the NOP is included in Appendix "L" of this EIR**,** along with copies of letters received in response to the NOP.

Consistent with CEQA Guidelines Section 15103, "Responsible and Trustee Agencies, and the Office of Planning and Research shall provide a response to a Notice of Preparation to the Lead Agency within 30 days after receipt of the notice. If they fail to reply within the 30 days with either a response or a well justified request for additional time, the lead agency may assume that none of those entities have a response to make and may ignore a late response."[9]

A scoping meeting was duly noticed in a newspaper of general circulation and held on March 5, 2020. No comments were received during this meeting.

Section 15093 of the State CEQA Guidelines requires decision-makers to balance the benefits of a proposed project against any unavoidable adverse environmental effects of the project. If the benefits of the project outweigh the unavoidable adverse environmental effects, then the decision-makers may adopt a statement of overriding considerations, finding that the environmental effects are acceptable in light of the project's benefits to the public.

As noted in CEQA Guidelines § 15105 (a), a Draft EIR that is submitted to the State Clearinghouse shall have a minimum review period of 45 days. This *Draft EIR* was circulated publicly for comment beginning on May 6, 2020. Following completion of the 45-day public review period ending on June 19, 2020, staff will prepare responses to comments and a *Final EIR* will be prepared. The *Final EIR* will then be forwarded to the County of Tulare Planning Commission for consideration of certification. Notwithstanding an appeal to the County of Tulare Board of Supervisors, a Notice of Determination will then be filed with the County Tulare County Clerk and also forwarded to the State of California, Office of Planning and Research.

[9] CEQA Guidelines, Section 15103.

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2 Project Description

The Rexford Solar Farm Project (proposed Project) involves the construction and operation of an up to 700 megawatt (MW) solar photovoltaic (PV) facility, including an energy storage system (ESS) with up to 700 MW storage capacity, on-site substation, transmission and/or collector lines, and ancillary components on approximately 3,614 acres of land historically used as agricultural farmland in unincorporated Tulare County, California.

The Project site consists of 40 discontiguous parcels in south-central Tulare County. A complete list of the Assessor Parcel Numbers and acreages can be found in Appendix "B" of this EIR. The General Plan and zoning designations expressly allow the installation of renewable solar power with a Special Use Permit. Additionally, the Tulare County Board of Supervisors has adopted the following Resolutions which allow photovoltaic land uses in designated agricultural lands. The Resolutions are provided in their entirety in Appendix "B" of this Draft EIR:

- Resolution No. 89-1275 Uniform Rules for Agricultural Preserves
- Resolution No. 99-0620 Establishing Rules on Farmland Security Zones
- Resolution No. 2010-0458 Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities County Wide
- Resolution No. 2010-0590 Amendment to Resolution Interpretation to Tulare County Zoning Ordinance No. 352
- Resolution No. 2010-0591 Compatibility for Public and Private Utility Structures Located on Agricultural Zoned Lands and Lands Under Williamson Act Contracts
- Resolution No. 2010-0717 Establishing Criteria for Public and Private Utility Structures Proposed on Agricultural Zoned Lands and Lands Under Williamson Act Contracts
- Resolution No. 2013-0104 Recommendation from the Agricultural Policy Advisory Committee Regarding Siting of Utility Scale Solar Facilities

2.1 Project Location

The Project site encompasses approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County (**Figure 2-1**). Neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. As shown on **Figure 2-2**, the Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route (SR) 65.

Figure 2-1. Regional Location

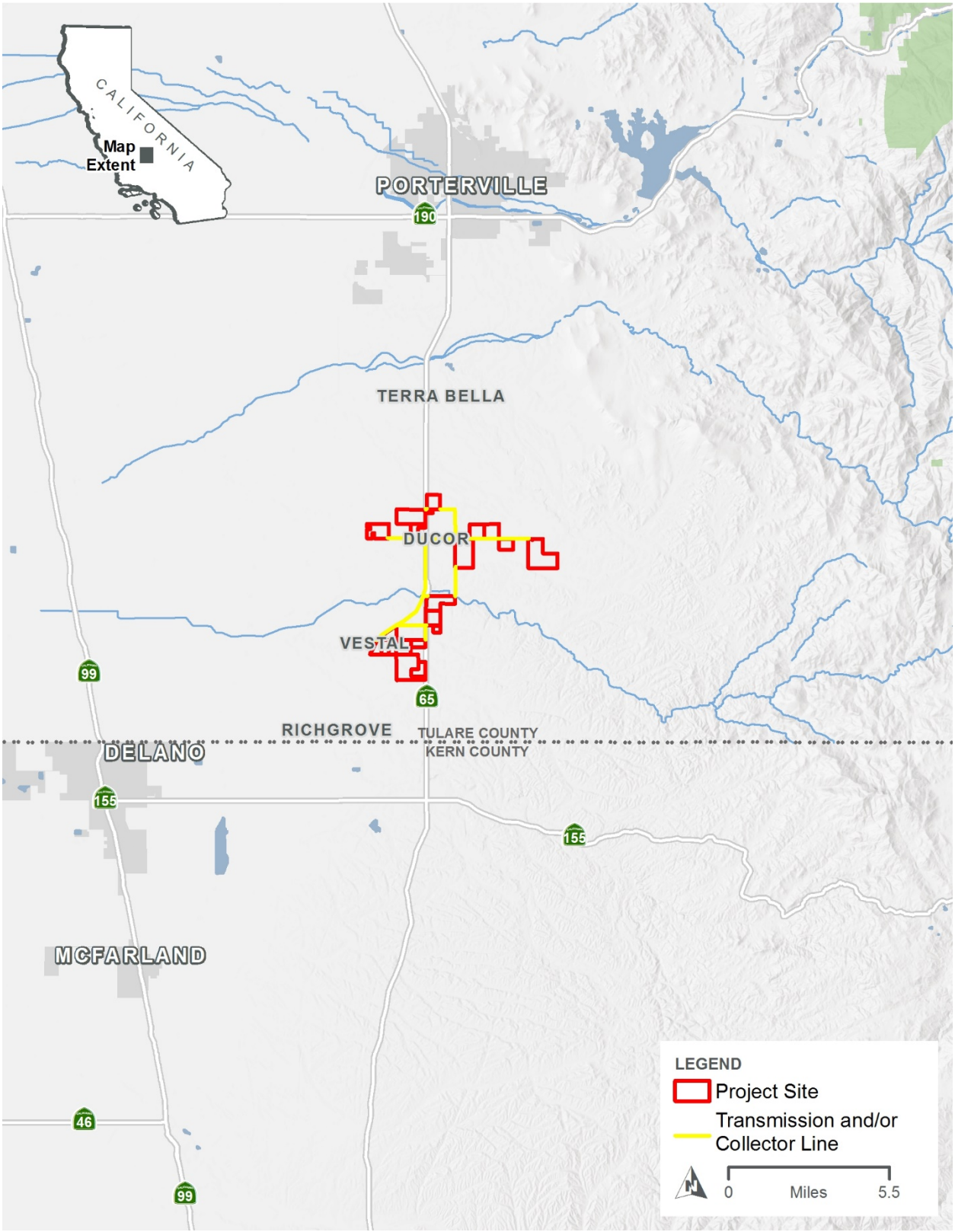
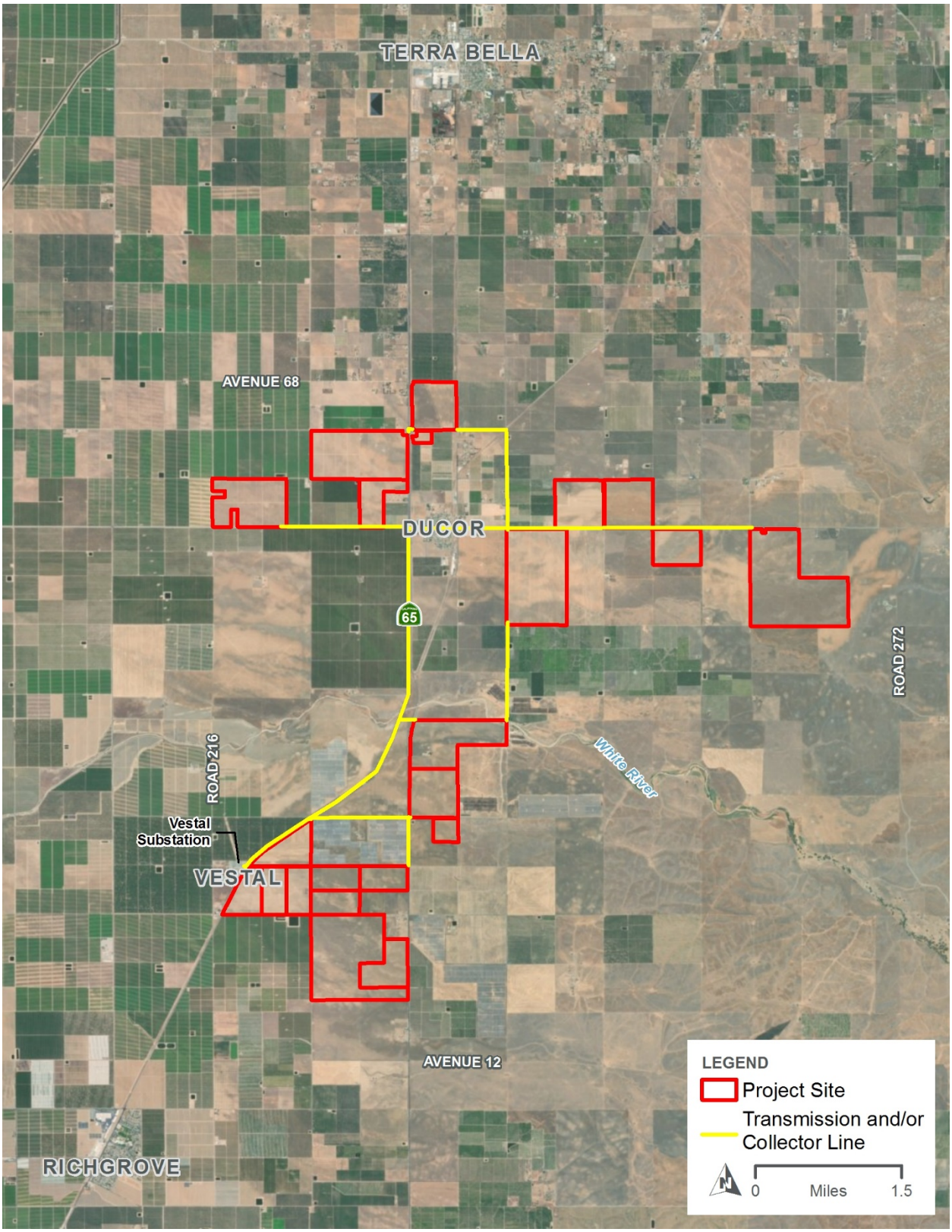


Figure 2-2. Project Site



2.2 Project Objectives

- Construct and operate a solar energy facility capable of producing up to 700 MW AC of electricity and/or 700 MW AC of energy storage to assist the State of California in achieving its 50 percent renewable portfolio standard by 2030;
- To provide energy to the electric grid to meet increasing demand for in-state generation;
- To facilitate enhanced grid operation by constructing and operating a solar energy generation facility coupled with energy storage system;
- Integrate operating facilities with the existing Vestal substation to connect power generated by the Project into the electricity grid;
- Interconnect directly to the Southern California Edison (SCE) electrical transmission system;
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases (GHGs);
- Help reduce reliance on foreign sources of fuel;
- Supply on-peak power to the electrical grid in California;
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006);
- Provide an investment in California and Tulare County that will create jobs and other economic benefits;
- Support and implement the efforts made by the County of Tulare to address climate change through its General Plan and Climate Action Plan;
- Minimize environmental impacts by locating in a suitable rural setting near existing power grid connections lines; and.
- Minimize environmental impacts by locating the facility in a remote location.

2.3 Project Characteristics

The proposed Project involves the construction of a utility-scale PV solar facility on approximately 3,614 acres of privately-owned land. The proposed Project will generate up to 700 MW of alternating current (AC) on a daily basis. Power generated by the proposed Project will be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line.

The proposed Project will include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, energy storage system (ESS), access roads and fencing, and on-site substation. An operations and maintenance (O&M) building may be constructed on the site.

The proposed Project may share O&M, substation, ESS, and/or transmission facilities with one or more nearby or future projects. Any lands not used for O&M, substation, ESS, and/or transmission facility areas on the Project site could instead be used by solar panels under such scenarios. The proposed site plan can be found in Appendix “M” of this DEIR.

2.3.1 Photovoltaic Panels/Solar Arrays

The proposed Project will use PV panels or modules (including but not limited to bi-facial or concentrated PV technology) on mounting frameworks to convert sunlight directly into electricity. Individual panels will be installed on either fixed-tilt or tracker mount systems (single- or dual-axis, using galvanized steel or aluminum). If the panels are configured for fixed tilt, they will be oriented toward the south. For tracking configurations, the panels will rotate to follow the sun over the course of the day. Depending on the mounting system used and on County building codes, panels are anticipated to remain between 6 and 8 feet high. **Figure 2-3** depicts representative examples of photovoltaic panel/mounting configurations.

The solar panel array will be arranged in groups called “blocks”, with inverter stations generally located centrally within the blocks. Blocks will produce direct electrical current (DC), which is converted to AC at the inverter stations.

Each PV module will be placed on a fixed-tilt or tracker mounting structure. The foundations for the mounting structures can extend to no more than 10 feet below ground, depending on the structure, soil conditions, and wind loads, and may be encased in concrete or use small concrete footings. A light-colored ground cover or palliative may be used to increase electricity production. Final solar panel layout and spacing will be optimized for Project area characteristics and the desired energy production profile.

Figure 2-3. Representative Examples of Photovoltaic Panel/Mounting Configuration

Typical Fixed-Tilt Solar Panel Rows

Typical Single-Axis Tracking Solar Panels

Typical Dual-Axis Tracking Solar Panels

Typical Fixed-Tilt Mounting Structure

Typical Dual-Axis Mounting Structure

2.3.2 Inverter Stations

DC energy is delivered from the panels via cable to inverter stations, generally located near the center of each block. Inverter stations convert the DC energy to AC energy which can be dispatched to the transmission system. Inverter stations are typically comprised of one or more inverter modules with a rated power of up to 5 MW each, a unit transformer, and voltage switch gear. The unit transformer and voltage switch gear are housed in steel enclosures, while the inverter module(s) are housed in cabinets. Depending on the vendor selected, the inverter station may lie within an enclosed or canopied metal structure, typically on a skid or concrete mounted pad. **Figure 2-4** depicts representative examples of typical inverter stations.

2.3.3 Energy Storage System (ESS)

The proposed Project may include one or more ESS, located at or near a substation/switchyard (onsite or shared) and/or at the inverter stations, or elsewhere onsite. Such large-scale ESSs will be up to 700 MWac in capacity and occupy no more than 25 acres in total area.

ESSs consist of modular and scalable battery packs and battery control systems that conform to U.S. national safety standards. The ESS modules, which could include commercially available lithium or flow batteries, typically consist of ISO standard containers (approximately 40'L x 8'W x 8'H) housed in pad- or post-mounted, stackable metal structures, but may also be housed in a dedicated building(s) in compliance with applicable regulations. The maximum height of a dedicated structure is not anticipated to exceed 25 feet. The actual dimensions and number of energy storage modules and structures vary depending on the application, supplier, and configuration chosen, as well as on offtaker/power purchase agreement requirements and on County building standards. The proposed Project may share an ESS with one or more nearby or future solar projects or may operate one or more standalone ESS facilities within the Project site. **Figure 2-5** depicts representative examples of typical energy storage systems.

2.3.4 Substation

Output from the inverter stations will be transferred via electrical conduits and electrical conductor wires to one or more Project substations or switchyards (collectively referred to as "substations" herein), and then onward via an up to 230kV dedicated gen-tie line to the SCE Vestal Substation.

The proposed Project and any associated ESS will have their own dedicated substation equipment located within the Project site. Dedicated equipment may incorporate several components, including auxiliary power transformers, distribution cabinets, revenue metering systems, a microwave transmission tower, and voltage switch gear.

Each substation will occupy an area of up to approximately five acres, secured separately by a chain-link fence. The final location(s) of each component will be determined before the issuance of building permits.

Substations typically include a small control building (roughly 500 square feet) standing approximately 10 feet in height. The building is either prefabricated concrete or steel housing with rooms for the voltage switch gear and the metering equipment, a room for the station supply transformer, and a separate control technology room in which the main computer, the intrusion detection system, and the main distribution equipment are housed. Components of this building (e.g., control technology room and intrusion detection system) may instead be located at an O&M building. **Figure 2-6** depicts a representative example of a typical substation design.

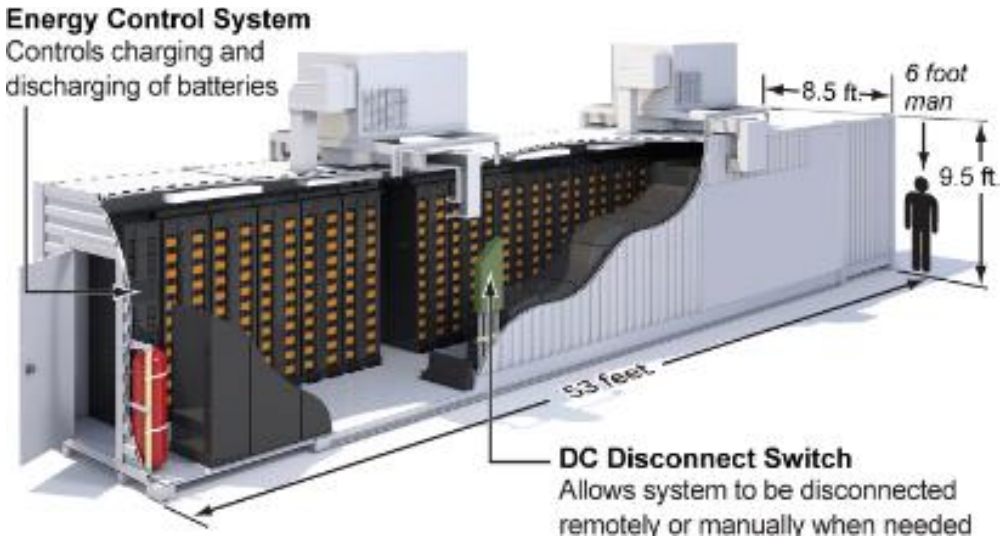
Figure 2-4. Representative Examples of Typical Inverter Stations

Figure 2-5. Representative Examples of Typical Energy Storage Systems

ESS Installed in Dedicated Structure

Modular ESS Installed on Concrete Pad

Modular ESS Installed on Multiple Concrete Pads



Typical ESS Module Configuration

Typical ESS

Figure 2-6. Representative Example of Typical Substation Design

2.3.5 Transmission and Collector Lines

The proposed Project will involve the construction of both transmission and collector lines. Power generated by the proposed Project will be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line. A franchise and/or encroachment agreement along public roads may ultimately be required for portions of the transmission and/or collector line. The proposed transmission and/or collector line configuration is depicted on **Figure 2-7**.

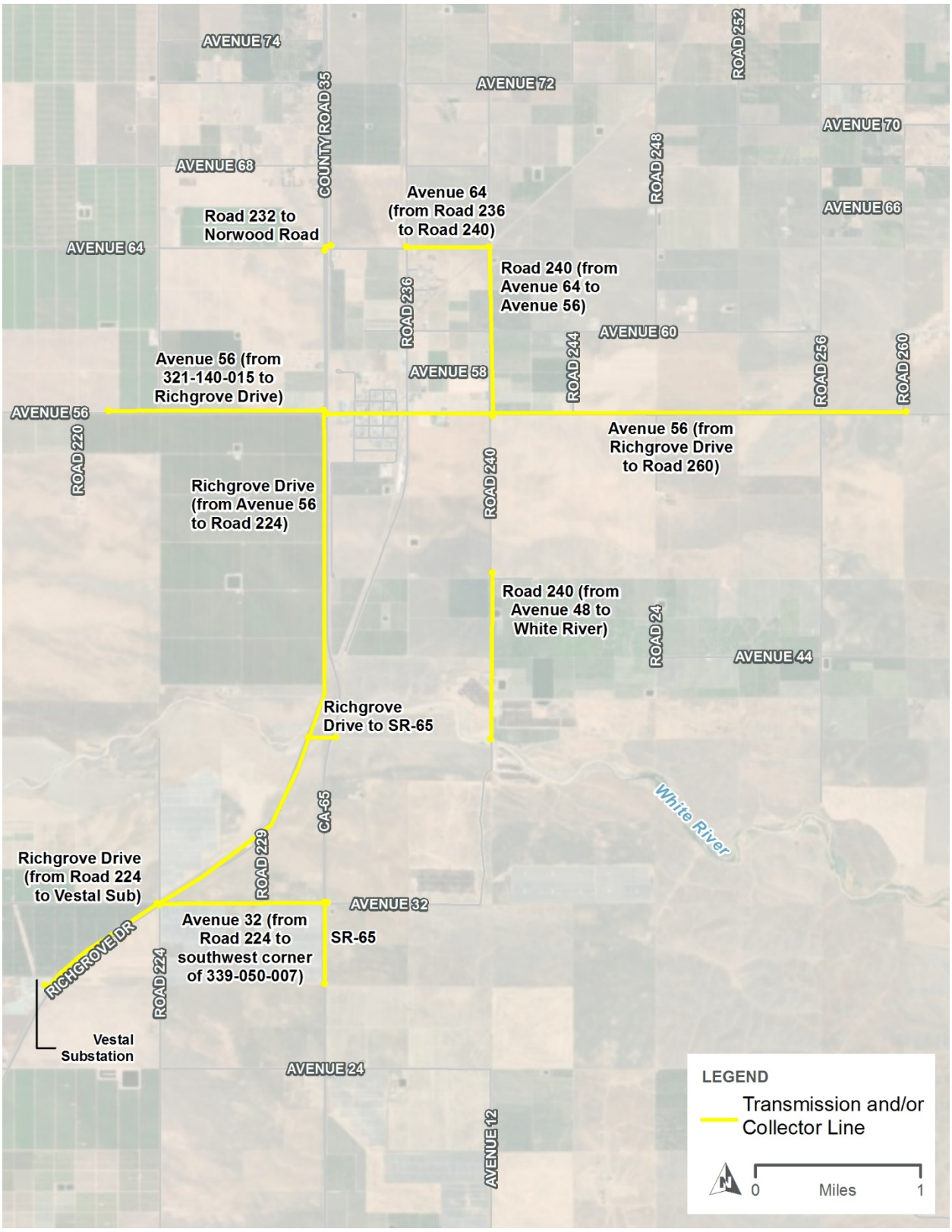
As depicted on **Figure 2-7**, the transmission and/or collector line component of the Project will extend along existing roadway right of ways from various portions of the Project site (where substations are located) ultimately connecting to the SCE Vestal Substation. The transmission and/or collector lines will be located along portions of Road 232, Avenue 56, Avenue 64, Road 224, Road 240, Avenue 32, Richgrove Drive, and SR 65, or could possibly utilize additional nearby routings. The total length of the transmission and/or collector lines will be approximately 13 miles in length.

2.3.6 Potential Network Upgrades

SCE may require network upgrades based on the final interconnection requirements to be identified in the Project's interconnection agreement. The upgrades may involve installing and/or upgrading relay and protection equipment, installing and/or implementing new Supervisory Control and Data Acquisition (SCADA) software, and installing/relocating/reorienting/upgrading existing equipment including transmission towers among other appurtenances at SCE's Vestal, Rector, and Pastoria Substations.

The interconnection work and network upgrades may also involve an expansion of the Vestal, Rector, and/or Pastoria Substation footprints to accommodate new breakers, dead end structures, bay installation, additional metering, capacitor banks, disconnect switches, and relays, among other appurtenances. In the event this occurs, a separate environmental review process will be undertaken.

Figure 2-7. Transmission and/or Collector Line Alignment Overview



2.3.7 Operations and Maintenance Building

The proposed Project may include an O&M building of approximately 40’ x 80’ in size, with associated on-site parking (**Figure 2-8**). The O&M building will not exceed 25 feet in height. The O&M building will be steel framed, with metal siding and roof panels. The O&M building may include the following:

- Office
- Repair building/parts storage
- Control room
- Restroom
- Septic tank and leach field

Roads, driveways and parking lot entrances will be constructed in accordance with Tulare County improvement standards. Parking spaces and walkways will be constructed in conformance with all California Accessibility Regulations.

The proposed Project may share O&M facilities and/or staff with one or more nearby or future solar projects, and/or may be remotely operated. Any unused O&M areas on-site may be covered by solar panels.

2.3.8 Water Storage Tank

One or more above-ground water storage tanks with a total capacity of up to 50,000 gallons may be placed on-site near the O&M building (if an O&M building is constructed on-site). The storage tank(s) near the O&M building will have the appropriate fire department connections to be used for fire suppression purposes.

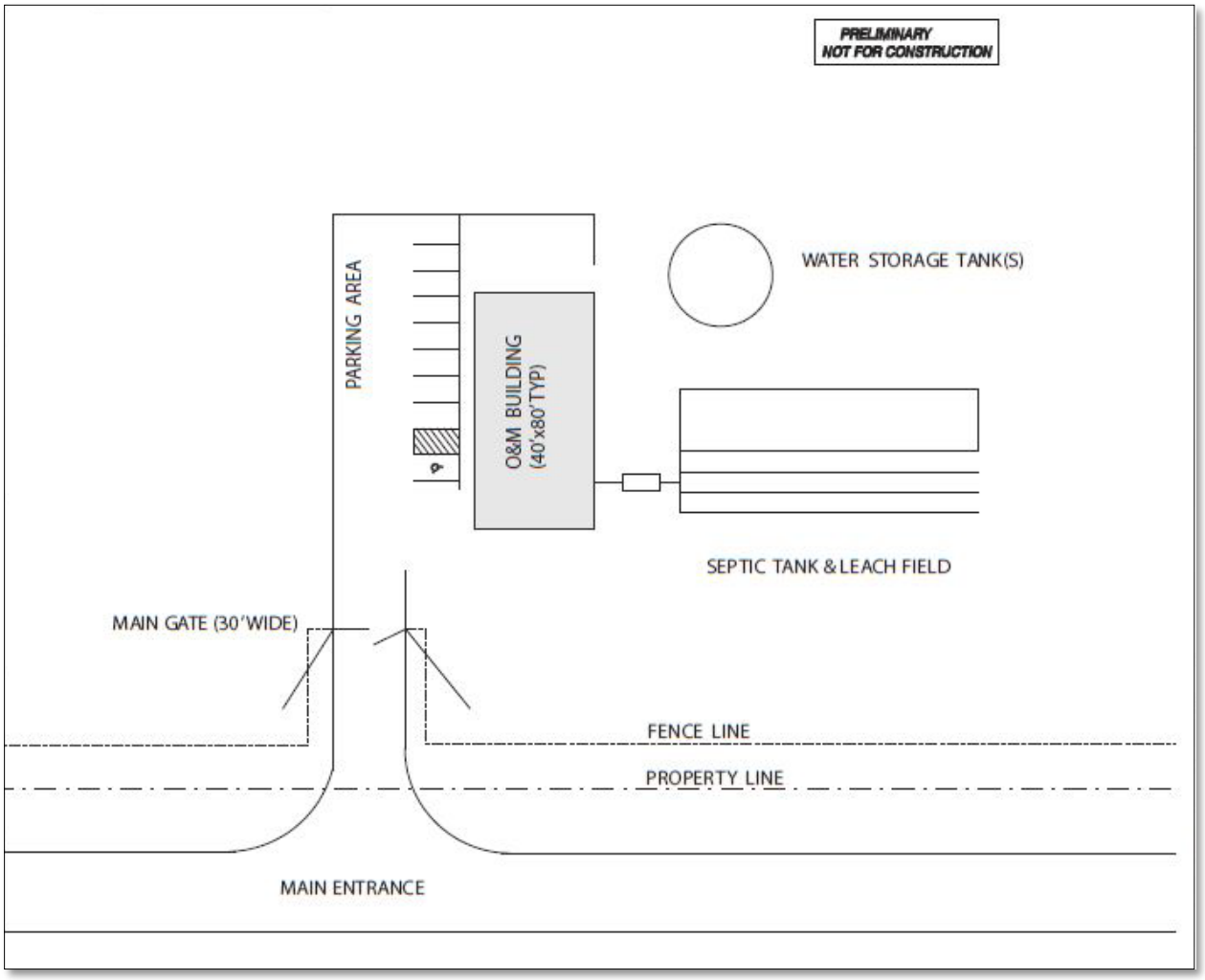
2.3.9 Auxiliary Facilities

Site Security and Fencing

The entire Project site will be enclosed within a chain link fence with barbed wire measuring up to eight feet in height from finished grade. An intrusion alarm system comprised of sensor cables integrated into the perimeter fence, intrusion detection cabinets placed approximately every 1,500 feet along the perimeter fence, and an intrusions control unit, located either in the substation control room or at the O&M building, or similar technology, may be installed. Additionally, the Project may include additional security measures consistent with County of Tulare regulations including, but not limited to, barbed wire, low voltage fencing with warning reflective signage, controlled access points, security alarms, security camera systems, and security guard vehicle patrols to deter trespassing and/or unauthorized activities that could interfere with operation of the Project.

Controlled access gates will be maintained at the main entrances to the Project site. Access to the Project site will be provided to offsite emergency response teams that respond in the event of an after-hours emergency. Enclosure gates will be manually operated with a key provided in an identified key box location.

Figure 2-8. Conceptual Operations and Maintenance Building Area Plan



Lighting System

Minimal lighting will be required for operations and will be limited to safety and security functions. Project lighting will be directed away from public rights-of-way. Site lighting may include motion sensor lights for security purposes. Lighting used on-site will be of the lowest intensity foot candle level, in compliance with any applicable regulations, measured at the property line after dark.

2.4 Project Construction

The construction-related activity period for the proposed Project, from site preparation through construction, testing, and commercial operation, is expected to commence as early as the fourth Quarter (Q4) 2021 and will encompass approximately 12 to 24 months.

Construction of the facility will include the following activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Collector line installation
- Architecture and landscaping

Impacts to roadways will be limited to construction-related activities of the Project. Construction-related vehicles will primarily access the Project site from State Route 65, and may also utilize county roads. It is estimated that up to 1,000 workers per day (during peak construction periods) will be required during the construction of the Project.

Heavy construction (i.e., grading and earthwork, concrete foundations) is expected to occur between 6:00 am and 5:00 pm, Monday through Friday. Additional hours, as approved by Tulare County RMA, may be necessary to make up schedule deficiencies or to complete critical construction activities. Although unlikely, some activities may continue 24 hours per day, seven days per week, with approval by Tulare County RMA. Low level noise activities (i.e., those below 60 dBA) may potentially occur between the hours of 10:00 pm and 7:00 a.m., with approval by Tulare County RMA. Low level noise activities during nighttime could potentially include refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning.

Materials and supplies will be delivered to the Project area by truck. Truck deliveries will typically occur during daylight hours. However, there will be offloading and/or transporting to the Project area on weekends and during evening hours as approved by Tulare County RMA.

Earthmoving activities are anticipated to be limited to the construction of the access roads, O&M building, substation, ESS(s), and any storm water protection or storage (detention) facilities. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas to control dust and increase albedo of the ground.

During the construction period of up to 24 months, the proposed Project will use up to approximately 400 acre-feet of water for construction activities.

2.5 Operations and Maintenance

Once the Project is constructed, maintenance will generally be limited to the following: cleaning of PV panels, monitoring electricity generation, providing site security, and facility maintenance (replacing or repairing inverters, wiring, and PV modules).

It is expected that the proposed Project will require an operational staff of up to 20 full-time employees. As previously discussed, it is possible that the proposed Project could share O&M, substation, ESS, and/or transmission facilities with one or more nearby or future projects. In such a scenario, the projects will share personnel, thereby potentially reducing the Project's on-site staff.

The facility will operate seven days a week, 24 hours a day. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available.

Operational water demands, which include water used for fire suppression, solar PV panel washing, and operation of the proposed O&M building, will total approximately 50 acre feet/year (AFY).

2.6 Project Features and Best Management Practices

The following describes standard Project features and best management practices (BMP) that will be applied during construction and long-term operation of the Project.

2.6.1 Waste and Hazardous Materials Management

The proposed Project will have minimal levels of materials on-site that have been defined as hazardous under 40 CFR, Part 261. The following materials are expected to be used during the construction, operation, and long-term maintenance of the Project:

- Insulating oil - used for electrical equipment
- Lubricating oil - used for maintenance vehicles
- Various solvents/detergents - equipment cleaning
- Gasoline - used for maintenance vehicles

Hazardous materials and wastes will be managed, used, handled, stored, and transported in accordance with applicable local and State regulations. All hazardous wastes will be maintained at quantities below the threshold requiring a Hazardous Material Management Program (HMMP): one 55-gallon drum. Though not expected, should any on-site storage of hazardous materials exceed one 55-gallon drum, an HMMP will be prepared and implemented.

2.6.2 Spill Prevention and Containment

Hazardous materials stored on-site will be in quantities of less than 55 gallons. Spill prevention and containment for construction and operation of the Project will adhere to the Environmental Protection Agency's guidance on Spill Prevention Control and Countermeasures and Tulare County Health and Human Services Agency regulations.

2.6.3 Wastewater/Septic System

A standard on-site septic tank and leach field may be used at the O&M building (if constructed on-site) to dispose sanitary wastewater, designed to meet operation and maintenance guidelines required by Tulare County laws, ordinances, regulations, and standards.

2.6.4 Inert Solids

Inert solid wastes resulting from construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, type 1-4 plastics, drywall, wood, and lubricating oils. Non-recyclable items include insulation, other plastics, food waste, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. A Construction Waste Management Plan will be prepared for review and approval by the County. Consistent with local regulations and the California Green Building Code, the Plan will provide for diversion of a minimum of 50 percent of construction waste from landfill.

Chemical storage tanks (if any) will be designed and installed to meet applicable local and state regulations. Any wastes classified as hazardous such as solvents, degreasing agents, concrete curing compounds, paints, adhesives, chemicals, or chemical containers will be stored (in an approved storage facility/shed/structure) and disposed of as required by local and state regulations. Material quantities of hazardous wastes are not expected; however, in the unlikely event such wastes were to occur, they will be handled pursuant to federal, state, and/or local regulations.

2.6.5 Health and Safety

Safety precautions and emergency systems will be implemented as part of the design and construction of the Project to ensure safe and reliable operation. Administrative controls will include classroom and hands-on training in operating and maintenance procedures, general safety items, and a planned maintenance program. These will work with the system design and monitoring features to enhance safety and reliability.

The Project will have an Emergency Response Plan (ERP). The ERP will address potential emergencies including chemical releases, fires, and injuries. All employees will be provided with communication devices, cell phones, or walkie-talkies, to provide assistance in the event of an emergency.

2.7 Facility Decommissioning

The Project proponent expects to sell the renewable energy produced by the product under the terms of a long-term Power Purchase Agreement (PPA) or directly into the wholesale market. The life of the solar facility is anticipated to be up to 35 years; however, the Project proponent may, at its discretion (and with approval by Tulare County), choose to extend the life of the facility, update technology and re-commission, or decommission and remove the system and its components. If, and when, a decommissioning event occurs, the solar site will be reclaimed as required by a County approved Decommissioning and Reclamation Plan (and attendant bond). This Reclamation Plan will provide financial assurances along with a detailed plan to remediate soils and return the land to its original pre-construction condition upon termination of the Project. At the time of re-use, the zoning/land use designations will be used to determine the Project site's highest and best use.

If, and when, Project decommissioning occurs, Project structures will be removed from the Project site. Above-ground equipment that will be removed will include module posts and support structures, onsite transmission poles that are not shared with third parties and the overhead collection system within the Project site, inverters, transformers, energy storage equipment, electrical wiring, equipment on the inverter pads, and related equipment and concrete pads. The substation will be removed if it is owned as part of the Project; however, if a public or private utility assumes ownership of the substation, the substation may remain on-site to be used as part of the utility service to supply other applications. Project roads will be restored as close as feasible to pre-construction conditions unless the landowner elects to retain the improved roads within the property. The area will be thoroughly cleaned and all debris removed. Most materials will be recycled to the extent feasible, while the balance of material will be disposed in landfills in compliance with all applicable laws. A collection and recycling program will be implemented in the event system components are manufactured with hazardous materials.

All decommissioning- and restoration-related activities, as contained in the County approved Decommissioning and Reclamation Plan, will adhere to the requirements of the appropriate governing authorities and in accordance with all applicable federal, state, and county regulations.

When the Project ceases operation, the facilities will be decommissioned and dismantled, and the Project site restored to a condition suitable for agricultural use (or other use as allowed by zoning/land use designations at the time of decommissioning). Decommissioning-related activities of the Project site will take approximately 4-6 months and will comprise removal of above-ground and below-ground (subsurface) structures; and site reclamation (including restoration of topsoil, revegetation, and seeding).

Temporary erosion and sedimentation control BMPs will be implemented during the decommissioning-related phase of the Project. Decommissioning-related activities will consist of:

- Dismantling and removal of all above-ground equipment (solar panels, tracker units, transformers, substation, ESS, enclosures, etc.);
- Excavation and removal of all below-ground cabling;
- Removal of posts;
- Removal of roads;
- Break-up and removal of concrete pads and foundations; and
- Scarification of compacted areas and re-grading of the Project site to pre-Project conditions.

Decommissioning-related activities of the Project will likely require similar water use as construction-related activities, due to water needs for dust control. Following decommissioning, if returned to an agricultural-ready use, the Project site will likely require similar water use as existing conditions. It would be speculative to estimate post-Project water usage if the site is returned to a use other than agriculture use as allowed by zoning/land use designations at the time of decommissioning. Post-Project, it is anticipated that the Project site will continue in active agricultural use, which is the same as its pre-Project use, and the same as current use of adjacent parcels. To minimize post-construction dust, a revegetation plan will be developed and implemented to repair temporary disturbance from installation-related activities, and to be compatible with long-term site vegetation management. Revegetation is also a dust control technique permissible in complying with the San Joaquin Valley Unified Air Pollution Control District's Regulation VIII (see Rule 8051).

2.8 Required Project Approvals

The proposed Project will require, but not be limited to the following local, state, and federal regulatory requirements:

County of Tulare discretionary approvals:

- The issuance of a Special Use Permit.
- The certification of the Final Environmental Impact Report.

Subsequent, ministerial approvals may include:

- The applicant, in conjunction with the County, may participate in a developer. Sales and/or tax use agreement.
- Certain sections or midsection line road reservations may be removed or vacated within the project site.
- The applicant may choose to enter into a franchise and/or encroachment agreement along public roads for portions of the transmission and/or collector line.
- Approval of a Stormwater Pollution Prevention Plan (construction) by the Central Valley Regional Water Quality Control Board.
- Compliance with Regulation VIII (Fugitive PM_{10} Prohibitions) of the San Joaquin Valley Unified Air Pollution Control District.
- Compliance with Rule 9510 (Indirect Source Review) of the San Joaquin Valley Unified Air Pollution Control District.
- Compliance with Caltrans encroachment permits or other requirements applicable to SR 65.
- The Lead Agency (Tulare County) will be adopting the Water Supply Assessment as part of consideration of approval of the Project consistent with the state water code.

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3 Environmental Analysis, Impacts, and Mitigation

For each environmental issue area, this chapter presents the existing environmental setting and conditions before Project implementation, regulatory setting, methods and assumptions used in the impact analysis, thresholds for determining significance, impacts that will result from the Project, and mitigation measures that will eliminate or reduce significant impacts. The following environmental issue areas are analyzed in this chapter:

- Section 3.1, Aesthetics
- Section 3.2, Agricultural Land and Forestry Resources
- Section 3.3, Air Quality
- Section 3.4, Biological Resources
- Section 3.5, Cultural Resources
- Section 3.6, Energy
- Section 3.7, Geology and Soils
- Section 3.8, Greenhouse Gas Emissions
- Section 3.9, Hazards and Hazardous Materials
- Section 3.10, Hydrology/Water Quality
- Section 3.11, Land Use and Planning
- Section 3.12, Mineral Resources
- Section 3.13, Noise
- Section 3.14, Population and Housing
- Section 3.15, Public Services
- Section 3.16, Recreation
- Section 3.17, Transportation
- Section 3.18, Tribal Cultural Resources
- Section 3.19, Utilities and Service Systems
- Section 3.20, Wildfire
- Section 3.21, Mandatory Findings of Significance

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3.1 Aesthetics

3.1.1 Summary of Findings

The proposed Project will result in ***Less than Significant Impacts*** related to Aesthetics. The impact analysis and determinations related to visual character are based on the visual simulations contained in the ""*Rexford Photovoltaic Solar Farms Aesthetics Study*" prepared by Aztec Engineering provided in Appendix "A" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis below.

3.1.2 Introduction

CEQA Requirements

CEQA requires that significant impacts on the environment be identified and, where possible, measures be added to minimize or eliminate impacts (CEQA Guidelines Section 15325). A "significant effect on the environment" is defined as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" (CEQA Guidelines Section 15382). With respect to aesthetics, potentially significant CEQA impacts include visual impacts to scenic vistas, scenic highways, the visual character of the site, and impacts from lighting and glare.

This section describes the existing visual environment in the proposed Project vicinity using accepted methodology to evaluate aesthetic/visual landscape quality and light/glare. Aesthetic considerations tend to be subjective. The methodologies used to evaluate aesthetic impacts to visual character are qualitative in nature, and are based on photographic documentation of the site and surrounding area.

The proposed Project site is located in the agricultural (Valley) portion of Tulare County. The Environmental Setting section describes scenic and aesthetic resources in the region, with special emphasis on the proposed Project site and vicinity. The Regulatory setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

The analyses of the existing visual setting and potential visual impacts resulting from the proposed Project are based primarily on information provided by the Project applicant.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

- Impact on a scenic vista
- Impact on a scenic highway
- Impact on visual quality
- Creation of glare or impacts on nighttime views

3.1.3 Environmental Setting

Visual Character of the Region

"Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies. The western portion of the County includes a portion of the San Joaquin Valley (Valley), and is generally flat, with large agricultural areas with generally compact towns interspersed. In the eastern portion of the County are foothills and the Sierra Nevada mountain range. The Project site is located on the southern central area of the Valley floor, which is fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations and small and medium sized manufacturing plants make up the economic base of the Valley region. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways throughout the County, electric towers, substations and telephone poles are noticeable. Mature trees, residential, commercial, and industrial development, utility structures, and other vertical forms are highly visible in the general region because of the flat terrain. Where such vertical elements are absent, horizon views are expansive. Most structures are relatively small; usually one story in height, though occasionally two story structures can be seen at commercial-scale or industrial agricultural complexes. The County provides a wide range of views from both mobile and stationary locations…"[1]

3.1.4 Existing Conditions

Visual Character

A site reconnaissance was conducted to identify visual resources in the general Project area, including the Project site. Viewpoints within the general Project area were selected based on the potential to see the site from surrounding areas. **Figure 3.1-1** illustrates the photo-documented key observation points (KOP) and the direction to which the photographs were taken. **Figure 3.1-2** through **Figure 3.1-8** show the existing conditions at the Project site. Descriptions of the KOPs are as follows:

- KOP 1: View looking north from SR 65
- KOP 2: View looking south from SR 65
- KOP 3: View from Avenue 56 looking east towards the Project site (APN 321-190-001)
- KOP 4: View from SR 65/Avenue 56 intersection looking northwest
- KOP 5: View of the Project Site (APN 321-040-025) on the Southeast from Road 232 Looking South
- KOP 6: View from southeast corner of Project site (APN 321-040-008) looking northwest onto the Project site
- KOP 7: View looking west from Avenue 56 towards the Project site (APN 323-040-007)

The viewer's distance from landscape elements plays an important role in the determination of an area's visual quality. Landscape elements are considered higher or lower in visual importance based on their proximity to the viewer, which contribute to a project area's overall viewshed. Generally, the

[1] Tulare County General Plan 2030 Update: Recirculated Draft EIR (RDEIR), Page 3.1-11.

closer a resource is to the viewer, the more dominant, and therefore visually important, it is to the viewer.

The Project site consists of 40 discontiguous parcels encompassing approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route (SR) 65.

The Project site is located in a generally undeveloped area on the floor of the San Joaquin Valley. The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures. The portion of the Project site located south of the White River is surrounded by the Tulare Solar Center facility. The Project site is located on the San Joaquin Valley floor in an unincorporated area of south-central Tulare County. The nearest area in the Project vicinity with some level of urbanization (residential and commercial uses) is along Avenue 56 between Road 232 and Road 236 in Ducor.

As shown in **Figure 3.1-2** through **Figure 3.1-8**, the existing visual character of the Project site is dominated by rural agricultural lands. Elevations within the Project site range from 475-670 feet (145-205 meters) above mean sea level. Utility structures (wooden power poles) and other vertical forms are highly visible in the general region because of the flat terrain. Existing features in the surrounding area contributing to the existing visual form are neighboring agricultural fields, local (primarily unpaved) roads, and overhead utilities. These features create a repetitive pattern throughout the area creating a limited variety of textures and colors throughout the Project vicinity.

Scenic Vistas

Rural agricultural land is the predominant landscape in Tulare County; however, there are no designated scenic resources on the Project site or within the Project vicinity.

On clear days, there is a view of foothills and the Sierra Nevada Mountains which can be viewed looking east of the Project site (**Figure 3.1-4**). During certain times of the year (typically the summer months), the view of this mountain range can be limited due to air quality impacts in the Valley.

Scenic Highways

“Tulare County currently does not have an officially designated state scenic highway. However, in Tulare County two State Routes are eligible to be on the list of California’s scenic highway list. These include State Route 190 from State Route 65 near Porterville to State Route 127 near Death Valley Junction and State Route 198 from State Route 99 to the Sequoia and Kings Canyon National Park Boundary.”[2] The nearest eligible scenic highway is State Route 190, located approximately 9.75 miles north of the Project site.

The Tulare County General Plan Update 2030 identifies a list of Scenic County Routes, several of which are located in agricultural areas. The nearest Scenic County Routes to the Project site are Avenue 56, Avenue 192, and Old Stage Road. As shown on **Figure 3.1-1**, there are a number of Project parcels located along Avenue 56. There will also be proposed collector line(s) located along Avenue 56. Road 192 is located approximately 3 miles west of the Project site. Old Stage Road is located less than 4 miles east of the Project site.

[2] Tulare County General Plan 2030 Update Background Report. Pages 5-15 and 5-16. http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

Figure 3.1-1. Key Observation Points Map

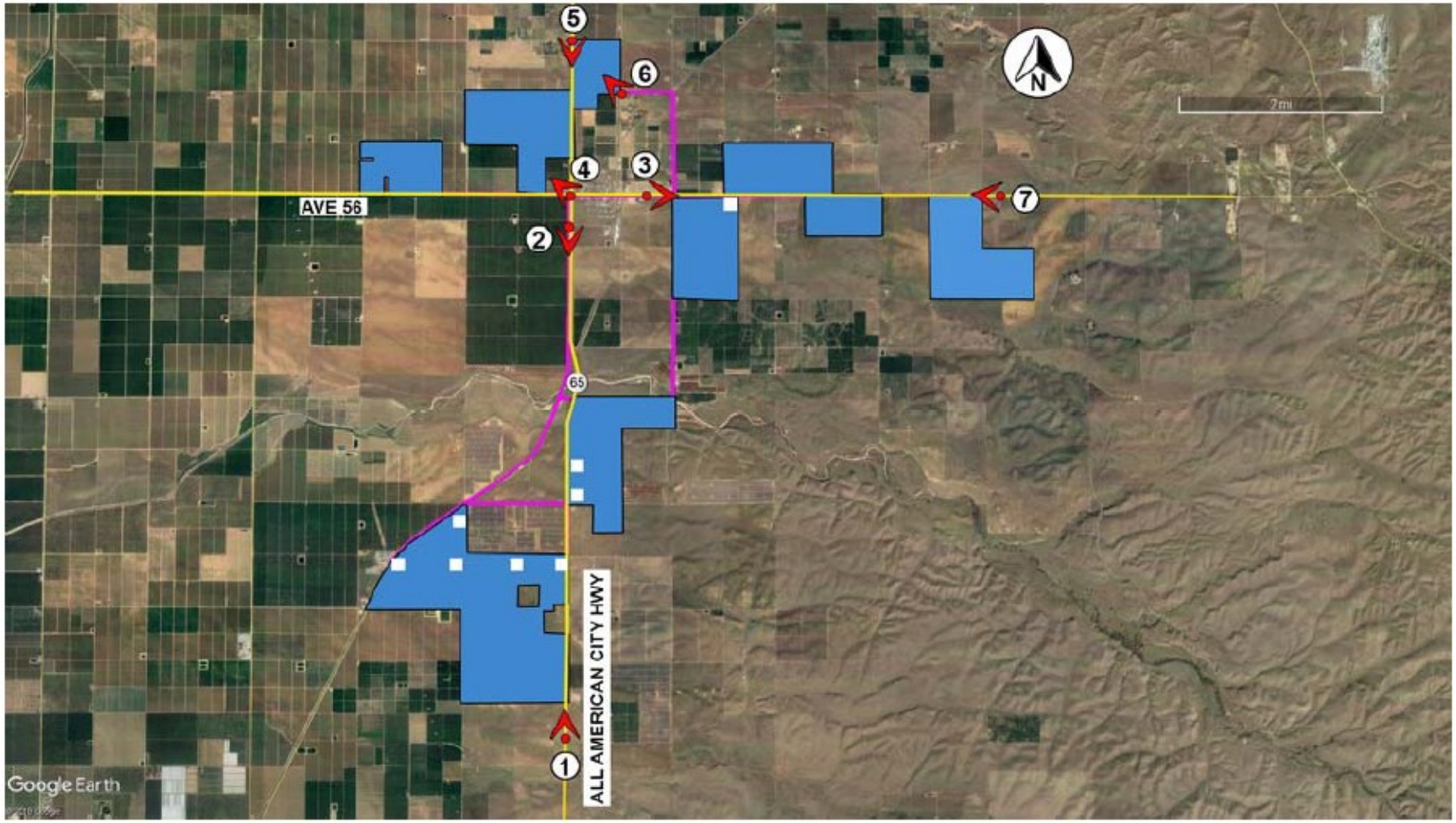

Figure 3.1-2. KOP 1 - View Looking North from SR 65

Figure 3.1-3. KOP 2 - View Looking South from SR 65

Figure 3.1-4. KOP 3 - View from Avenue 56 Looking East towards the Project Site (APN 321-190-001)

Figure 3.1-5. KOP 4 - View from SR 65/Avenue 56 Intersection Looking Northwest

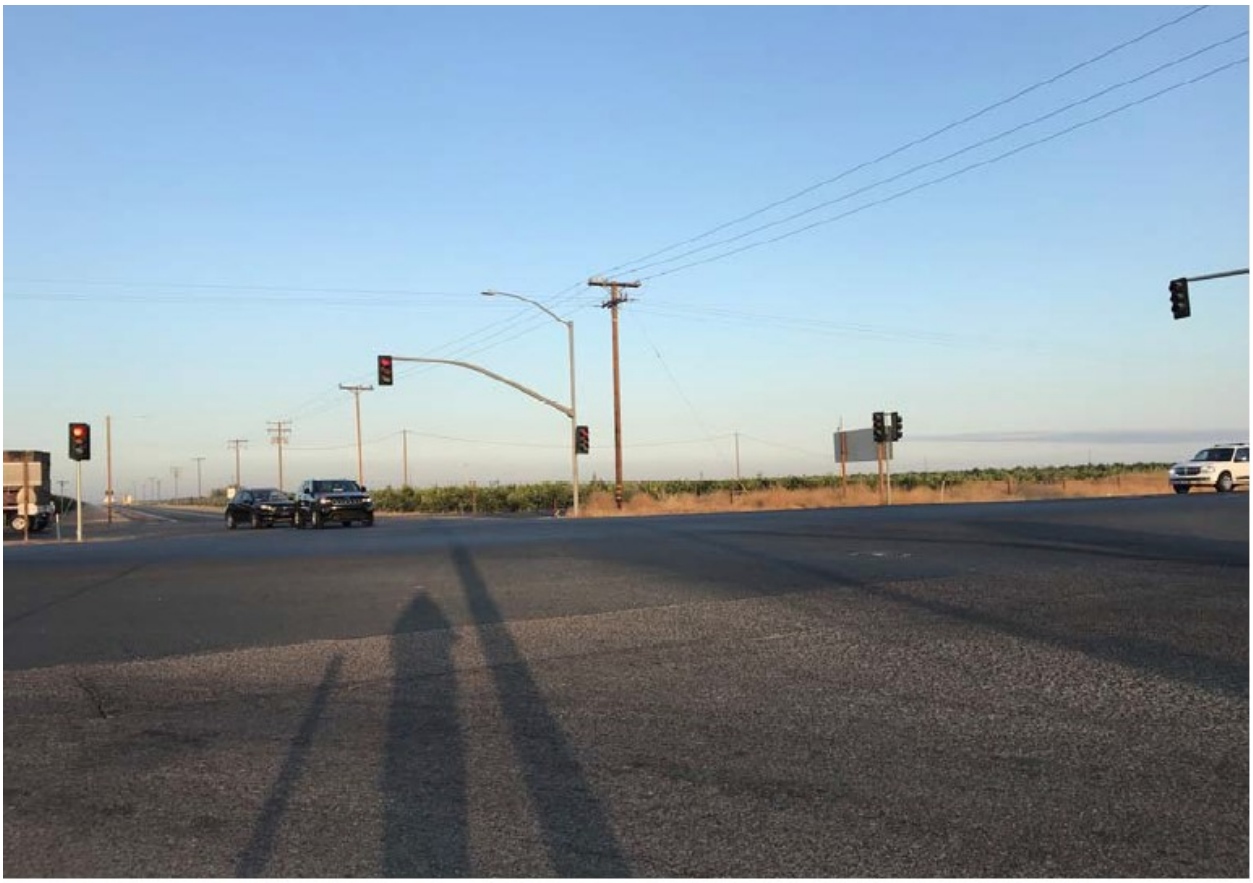

Figure 3.1-6. KOP 5 - View of the Project Site (APN 321-040-025) on the Southeast from Road 232 Looking South

Figure 3.1-7. KOP 6 - View from Southeast Corner of Project Site (APN 321-040-008) Looking Northwest onto the Project Site

Figure 3.1-8. KOP 7 - View Looking West from Avenue 56 towards the Project Site (APN 323-040-007)

Light, Glare, Glint

Glare is considered a continuous source of brightness, relative to diffused light, whereas glint is a direct redirection of the sun beam in the surface of a PV solar module. Glint is highly directional, since its origin is purely reflective, whereas glare is the reflection of diffuse irradiance; it is not a direct reflection of the sun.

Because of the nature of the existing agricultural land uses and few residences, limited light is generated from within the Project area. The majority of the light and glare that emits within the Project site is a result of motor vehicles traveling on surrounding roadways and farm equipment. Local roadways generate glare both during the night hours when cars travel with lights on, and during daytime hours because of the sun's reflection from cars and pavement surfaces. When light is not sufficiently screened and spills over into areas outside of a particular development area, the effect is called "light trespassing."

3.1.5 Regulatory Setting

State

Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (Commission) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) on April 23, 2008 and went into effect on January 1, 2010. The changes included new requirements for outdoor lighting, which vary according to the "Lighting Zone" district in which the equipment is located. A Light Zone 2 designation is by default for all "rural areas" as defined by the U.S. Census Bureau; these are generally locations of low lighting ambient illumination10. Approved existing outdoor lighting systems in rural areas prior to the adoption of the 2008 Standards update, are not required to meet the Building Energy Efficiency Standards for lighting allowances in the Lighting Zone 2 district.

Scenic Highway Program

The California Scenic Highway Program was established by the state Legislature in 1963 for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The state laws governing the scenic highways program are found in The Streets and Highways Code Sections 260-263.

In Tulare County, portions of State Routes 190, 198, and 180 are eligible for state scenic highway designation; however, these highway corridors have not been officially designated as State Scenic Highways.[3]

Local

County Scenic Roadways

"Tulare County's existing General Plan identifies State designated scenic highways and County designated eligible highways. There are three highway segments designated as eligible by the State.

[3] Tulare County General Plan 2030 Update, Goals and Policies Report Part 1. Page 7-5.

These include State Route 198 from Visalia to Three Rivers, State Route 190 from Porterville to Ponderosa, and State Route 180 extending through Federal land in the northern portion of Tulare County. State Route 198 closely follows around Lake Kaweah and the Kaweah River, while State Route 190 follows around Lake Success and the Tule River. Both Scenic Highways travel through agricultural areas of the valley floor to the foothills and the Sierra Nevada Range. Additionally, the General Plan Update identifies preserving the rural agricultural character of SR 99 and SR 65 as valuable to the County and communities."[4]

Tulare County General Plan Policies

The Tulare County General Plan has several policies that apply to projects within the County of Tulare. General Plan policies that relate to the proposed Project are listed below.

SL-1.1 Natural Landscapes. During review of discretionary approvals, including parcel and subdivision maps, the County shall as appropriate, require new development to not significantly impact or block views of Tulare County's natural landscapes. To this end, the County may require new development to:

1. Be sited to minimize obstruction of views from public lands and rights-of-ways,
2. Be designed to reduce visual prominence by keeping development below ridge lines, using regionally familiar architectural forms, materials, and colors that blend structures into the landscape,
3. Screen parking areas from view,
4. Including landscaping that screens the development,
5. Limit the impact of new roadways and grading on natural settings, and
6. Include signage that is compatible and in character with the location and building design.

SL-1.2 Working Landscapes. The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:

1. Referencing traditional agricultural building forms and materials,
2. Screening and breaking up parking and paving with landscaping, and
3. Minimizing light pollution and bright signage.

SL-2.1 Designated Scenic Routes and Highways. The County shall protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways by:

1. Requiring development within existing eligible State scenic highway corridors to adhere to land use and design standards and guidelines required by the State Scenic Highway Program,
2. Supporting and encouraging citizen initiatives working for formal designation of eligible segments of State Highway 198 and State Highway 190 as State scenic highways,

[4] Tulare County General Plan 2030 Update, August 2012. Recirculated Draft EIR Page 3.1-11. http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf. Accessed March 2020.

3. Formalizing a system of County scenic routes throughout the County and,
4. Requiring development located within County scenic route corridors to adhere to local design guidelines and standards.

LU-7.6 Screening. The County shall require landscaping to adequately screen new industrial uses to minimize visual impacts.

LU-7.14 Contextual and Compatible Design. The County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion which is compatible with the scale of surrounding structures.

LU-7.19 Minimize Lighting Impacts. The County shall ensure that lighting in residential areas and along County roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas unless required for public safety.

3.1.6 Impact Evaluation

Would the Project:

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

Project Impact Analysis: ***No Impact***

The Project site is located on the San Joaquin Valley floor in an unincorporated area of south-central Tulare County. The Project site is generally flat with unobstructed views of the surrounding agricultural lands and SR 65. Neither the Project site nor any of the surrounding land uses contain features typically associated with scenic vistas (e.g., ridgelines, peaks, overlooks). Therefore, little opportunity exists for Project components to obscure views.

Rural agricultural land is the predominant landscape in Tulare County; however, there are no designated scenic vistas on the Project site or within the Project vicinity. On clear days, there is a view of foothills and the Sierra Nevada Mountains which can be viewed looking east of the Project site. Due to the impacts of air quality in the Valley, the view of this mountain range can often be limited.

The on-site solar photovoltaic Project components will be low-profile. Depending on the mounting system used and on County building codes, PV panels are anticipated to be up to 8 feet high at full tilt. No building (e.g., operations and maintenance) will be greater than 25 feet in height. The proposed Project will involve the construction of both transmission and collector lines. However, the transmission and collector lines will extend along existing roadway rights of ways and will blend in with existing utility structures. These structures are generally pole-mounted utilities that do not obstruct views and are similar in characteristics as existing electrical utility infrastructure.

Given that there are no designated scenic resources within the Project vicinity that will be affected by the Project and that the profiles of solar photovoltaic panels are limited to 8 feet high at full tilt or otherwise comprised of structures that are similar to existing utility infrastructure in the area,, implementation of the proposed Project will not adversely affect any scenic vistas. This is considered a Less than Significant Impact. Therefore, a ***Less than Significant Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, there are no designated scenic vistas on the Project site or within the Project vicinity. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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

Project Impact Analysis: ***No Impact***

There are no designated state scenic highways in the Project vicinity or in Tulare County. Portions of State Routes 190, 198, and 80 are eligible for state scenic highway designation, but are not located in the Project vicinity. The Project site is not visible from any of the Tulare County eligible state scenic highways. The nearest eligible scenic highway is State Route 190, located approximately 9.75 miles north of the Project site.

The Tulare County General Plan Update 2030 identifies a list of Scenic County Routes. The nearest Scenic County Routes to the Project site are Avenue 56, Avenue 192, and Old Stage Road. There are a number of Project parcels located along Avenue 56 that will be developed with the solar facility. Additionally, proposed collector line(s) will be located along Avenue 56. Road 192 is located approximately 3 miles west of the Project site. Old Stage Road is located less than 4 miles east of the Project site.

The Project site will not be visible from the eligible State Routes 190, 198, and 180; however, the site will be visible from Avenue 56, which is designated as a Scenic County Route. As part of the Project, a 50-foot setback from the property line to the solar panels will be implemented to lessen the visual impacts. While the Project will be visible to traffic traveling along Avenue 56, there are no designated state scenic highways in the Project vicinity. Furthermore, the Project site does not contain scenic resources such as trees, rock outcroppings, or historic buildings. Therefore, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, there are no designated state scenic highways in the Project vicinity. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

c) 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?

Project Impact Analysis: ***Less than Significant Impact***

The Project site is located in an area that has been subjected to significant alteration due to historical and current agricultural use. The Project site is rural in character with a variety of visual encroachments, including utility structures (wooden power poles), scattered rural residences and agricultural-related structures, and roadways. The nearest area in the Project vicinity with reasonable urbanization (residential and commercial uses) is along Avenue 56 between Road 232 and Road 236 in Ducor. The portion of the Project site located south of the White River is surrounded by the Tulare Solar Center facility.

Overall, the Project will modify the existing landscape by converting approximately 3,614 acres of agricultural land to a solar energy generation facility. Construction-related impacts to visual character and quality of the Project site and surrounding areas will occur due to the presence of exposed soil, construction-related vehicles and workers, heavy equipment and building materials. This impact and change from existing conditions will be noticeable but temporary and short-term, lasting only through the end of the period of construction-related activities. Therefore, construction- and decommissioning-related activities will not substantially change the existing visual character and quality of the Project site or surroundings.

Impacts from Project operation will be associated with the presence of new structures including the PV panels, inverter stations, energy storage system(s), substation, O&M building, site perimeter fencing, and access roads at the Project site. These structures will be present for the duration of Project operation, which is anticipated to be approximately 35 years. The proposed Project will also include the construction of both transmission and collector lines along existing roadway rights-of-way.

Visual simulations were created for the seven KOPs (**Figure 3.1-1**) to illustrate the visual representation of the proposed condition to illustrate the potential changes of the visual environment. Visual simulations (also termed “photographic simulations” or “photo-simulations”) are realistic, computer-generated, three-dimensional images of a project that simulate certain project features in their context (as they will be seen from critical views and under specific viewing conditions), matching baseline photographs of the same views. These conditions include angle of view, distance, and time of day, ambient lighting, and atmospheric perspective (the attenuation of details because of particulates or moisture). The computer imaging is generally restricted to features of the project, with the context being represented by a photograph. The image and photograph are then blended to realistically portray the project in its context. Three-dimensional photo-simulations are simulations based on a photographic montage and three-dimensional modeling of geographic elevation information with other associated pertinent information that is representative and accurate.

Current industry standard procedures were used for the development of the visual simulations, resulting in the visual simulation that is both seamless and accurate. The photo simulations

presented are by no means representative of all views affected. They are included to provide the reader with a better overall sense of Project changes to the existing environment as well as to help visualize public perception and responses to these changes.

As described in Chapter 3, Project Description, the proposed Project will use PV panels or modules on mounting frameworks to convert sunlight directly into electricity. Individual panels will be installed on either fixed-tilt or tracker mount systems (single- or dual-axis, using galvanized steel or aluminum). Depending on the mounting system used and on County building codes, panels are anticipated to be up to 8 feet high at full tilt. **Figure 3.1-9** through **Figure 3.1-15** illustrates the views from the seven KOPs with the Project simulated.

Viewers potentially affected by operational impacts will be motorists traveling on roads near the Project site such as Avenue 56, Richgrove Drive, and SR 65. These motorists will have views of the solar panels and vertical structures such as fencing and substation. As part of the Project, the solar arrays and associated fencing will be set back 50 feet from the property line such that a vehicle driver's view of the Project will be short-lived and attenuated in the foreground by the required setbacks. The overhead transmission and collector lines will not substantially change the visual character of the lands surrounding the Project site, as there are existing utility structures in the Project vicinity (**Figure 3.1-10, Figure 3.1-11, Figure 3.1-12,** and **Figure 3.1-14**). The proposed Project will be absorbed into the broader landscape that already includes agricultural-related structures, electricity transmission structures, and a utility-scale solar facility (Tulare Solar Center facility).

The Project substation will introduce vertical, industrial structures into the visual landscape; however, the existing visual setting contains power lines, agricultural equipment, and agricultural-related buildings and structures common in existing views near the Project site. Visual changes attributable to the Project will be minimal as the Project's components (solar array, O&M building, substation, energy storage system, etc.) are relatively low in height, the Project incorporates non-reflective materials, and it does not distract from the existing vegetation and developments in the surrounding area. Overall, although the Project will result in a change to the existing visual setting, the Project will not substantially degrade the existing visual character or quality of the site and its surroundings. Therefore, the Project will result in a ***Less than Significant Impact*** to existing visual character and public views of the site.

Figure 3.1-9. KOP 1 - View Looking North from SR 65

Figure 3.1-10. KOP 2 - View Looking South from SR 65

Figure 3.1-11. KOP 3 - View from Avenue 56 Looking East towards the Project Site (APN 321-190-001)

Figure 3.1-12. KOP 4 – View from SR 65/Avenue 56 Intersection Looking Northwest

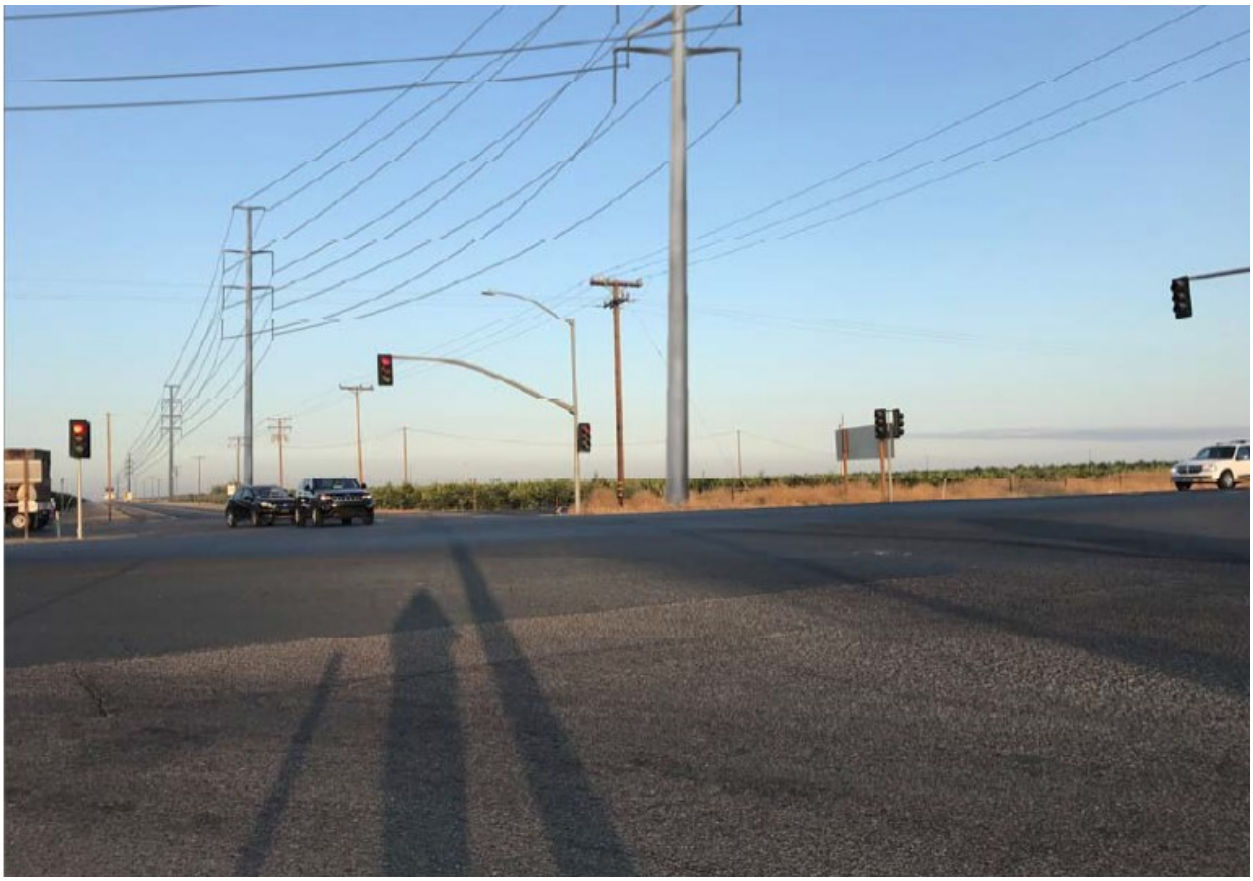

Figure 3.1-13. KOP 5 - View of the Project Site (APN 321-040-025) on the Southeast from Road 232 Looking South

Figure 3.1-14. KOP 6 - View from Southeast Corner of Project Site (APN 321-040-008) Looking Northwest onto the Project Site

Figure 3.1-15. KOP 7 - View Looking West from SR Avenue 56 towards the Project Site (APN 323-040-007)

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, although the Project will result in a change to the existing visual setting, the Project will not substantially degrade the existing visual character or quality of the site and its surroundings. As with the proposed Project, other cumulative projects will be required to comply with Tulare County requirements (i.e., setbacks) to minimize potential visual impacts. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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

Project Impact Analysis:

Construction- and decommissioning-related activities of the proposed Project will occur during daylight hours and, as a result, no lighting will be necessary for construction-related activities. These activities will lead to a temporary increase in truck and equipment traffic that may increase glare conditions due to light hitting the surface of equipment or trucks. However, this potential increase in glare will be short-term, intermittent, and temporary as any sources of glare will not be stationary for an extended period of time and will cease to occur once construction- and decommissioning-related activities are completed. Therefore, construction and decommissioning of the proposed Project will not result in substantial glare that will affect daytime or nighttime views.

During operation, the Project will include security lighting during the evening hours at the entrance and at each inverter station. Motion detectors will be installed on all lights except the main site entrance. All lighting will be designed in accordance with applicable Tulare County requirements. This lighting will be designed to provide the minimum illumination necessary to the achieve safety and security objectives. Light fixtures will be shielded and directed downward in order to avoid light spillage onto adjacent properties. These methods to limit light pollution will prevent the Project from becoming a new source of substantial light. All lighting associated with the Project will be subject to County approval and compliance with Tulare County requirements. The proposed nighttime security lighting will result in a less than significant impact.

The proposed Project will involve the installation of PV solar systems, which convert sunlight directly into electricity, and by their shear nature, are non-reflective. “By nature, PV panels are designed to absorb as much of the solar spectrum as possible in order to convert sunlight to electricity and are furnished with anti-reflective coating for that purpose. Reflectivity levels of solar panels are decisively lower than standard glass or galvanized steel, and should not pose a reflectance hazard to area viewers.”[5] Other glare sources in nature (free water surfaces) have a higher glare effect than PV modules. “Reflected light from standard PV modules’ surface is

[5] Aztec. 2017. Big Rock Cluster Solar Farms – Reflectivity Analysis. Page 4.

between 10 to 20 percent of the incident radiation (as low as free water surfaces), while galvanized steel (used in industrial roofs) is between 40 to 90 percent.[6] The Project will generally avoid the use of materials, such as fiberglass, aluminum or vinyl/plastic siding, galvanized products, and brightly painted steel roofs, which have the potential to create on- and off-site glare impacts.

Moreover, light reflected from the PV panels will travel above the line of site of most, if not all, viewers. PV tracking systems position the array so that the sun's rays are always perpendicular to the face of the panel. What light is reflected from the panels is reflected back towards the sun. During midday conditions, when the sun is high in the sky, the rays of the sun are reflected directly upwards. When the sun is low on the horizon (near dawn or dusk), the sun's angle in the sky is low; however, reflected rays will still be directed away from ground-level receptors because the maximum downward angle of the arrays will not be below 30 degrees. Similarly, and also due to their low reflectivity, the panels are not anticipated to cause visual impairment for motorists on area roadways because reflected rays will not be below 30 degrees and will pass above the line of sight of drivers. Viewers subsequently are not anticipated to experience substantially increased glare or glint as a result of the Project. Therefore, the proposed Project will have a ***Less than Significant Impact*** regarding light and glare.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the proposed Project will not create a new source of substantial light or glare which will adversely affect day or nighttime views in the area. All lighting associated with the Project will be subject to County approval and compliance with Tulare County requirements. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

[6] Ibid.

3.2 Agricultural Land and Forestry Resources

3.2.1 Summary of Findings

The proposed Project will result in a ***Less Than Significant Impact*** related to Agricultural Land and Forestry Resources. A detailed review of potential impacts is provided in the following analysis.

The Tulare County Board of Supervisors has adopted the following Resolutions which allow photovoltaic land uses in designated agricultural lands. The Resolutions are provided in their entirety in Appendix "B" of this EIR:

- Resolution No. 89-1275 Uniform Rules for Agricultural Preserves;
- Resolution No. 99-0620 Establishing Rules on Farmland Security Zones;
- Resolution No. 2010-0458 Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities County Wide;
- Resolution No. 2010-0590 Amendment to Resolution Interpretation to Tulare County Zoning Ordinance No. 352;
- Resolution No. 2010-0591 Compatibility for Public and Private Utility Structures Located on Agricultural Zoned Lands and Lands Under Williamson Act Contracts;
- Resolution No. 2010-0717 Establishing Criteria for Public and Private Utility Structures Proposed on Agricultural Zoned Lands and Lands Under Williamson Act Contracts; and,
- Resolution No. 2013-0104 Recommendation from the Agricultural Policy Advisory Committee Regarding Siting of Utility Scale Solar Facilities.

3.2.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to agricultural land and forestry resources. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in CEQA Guidelines Section 15126.2(a), "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct,

indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Agricultural Lands and Forestry Resources in the County. The Regulatory Setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update (General Plan), Tulare County General Plan 2030 Update Background Report (Background Report), and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA Thresholds of Significance

The Department of Conservation identifies the location of prime Agricultural Land resource areas and Williamson Act Contract lands. Thresholds of potential significance will include the following:

- Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
- Conflict with Williamson Act Contracts
- Convert Forest Land

3.2.3 Environmental Setting

"Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area."[2]

Agricultural Productivity

The Project site is located in the San Joaquin Valley portion of Tulare County. This area is characterized by rich, highly productive farmland. Agriculture is the most important sector in Tulare County's economy, and agriculture and related industries make Tulare County one of the two most productive agricultural counties in the United States, according to Tulare County Farm Bureau statistics.[3] "Agricultural lands (crop and commodity production and grazing) also provide the County's most visible source of open space lands. As such, the protection of agricultural lands and continued growth and production of agriculture industries is essential to all County residents."[4]

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[1] CEQA Guidelines, Section 15126.2(a).

[2] Tulare County General Plan 2030 Update, Recirculated DEIR. February 2010 (SCH # 2006041162). Page 3.11-5.

[3] Tulare County Farm Bureau. Tulare County Agricultural Facts. http://www.tulcofb.org/index.php?page=agfacts. Accessed February 2020.

[4] Tulare County General Plan 2030 Update, August 2012. Page 3-4.

The *2018 Tulare County Annual Crop and Livestock Report* listed Tulare County's total gross production value for 2018 as $7,213,303,400. Milk was the leading agricultural commodity in Tulare County in 2015, representing 23.5% of the total crop and livestock value. The 2018 report listed over 120 different commodities, 45 of which had a gross value greater than $1 million. The top five agricultural commodities in the County in 2018, based on total/gross value were milk, grapes, oranges, cattle, and tangerines.[5]

Tulare County Farmland Conversion

In line with the State of California, Tulare County has also seen a decrease in FMMP-designated farmland. As shown in **Table 3.2-1,** between the years 2014 and 2016, Tulare County lost 278 acres of Prime Farmland, and gained 1,469 acres of Farmland of Statewide Importance and 270 acres of Unique Farmland.[6]

Table 3.2-1. Tulare County Change in Agricultural Land Use Summary (2014-2016)[7]

	Total Acres Inventoried		2014-2016 Acreage Changes
Farmland Category	**2014**	**2016**	**Net Acreage Changed**
Prime Farmland	366,414	366,136	-278
Farmland of Statewide Importance	320,886	322,355	1,469
Unique Farmland	11,421	11,691	270
Farmland of Local Importance	160,450	157,937	-2,513
Important Farmland Subtotal	**859,171**	**858,119**	**-1,052**
Grazing Land	439,961	439,934	-27
Agricultural Land Subtotal	**1,299,132**	**1,298,053**	**-1,079**
Urban and Built-up Land	62,949	64,620	1,671
Other Land	219,185	218,593	-592
Water Area	4,656	4,656	0
Total Area Inventoried	1,585,922	1,585,922	0

"For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer)."[8]

[5] 2018 Tulare County Annual Crop and Livestock Report. October 2019. https://agcomm.co.tulare.ca.us/ag/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2018-crop-report/. Accessed February 2020.

[6] California Department of Conservation, Division of Land Resource Protection. Table A-44 Tulare County 2014-2016 Land Use Conversion. https://www.conservation.ca.gov/dlrp/fmmp/Pages/county_info.aspx. Accessed February 2020.

[7] Ibid.

[8] Tulare County General Plan 2030 Update, Recirculated DEIR (SCH # 2006041162). February. 2010. Page 3.10-13.

Williamson Act

Much of Tulare County's farmland is under California Land Conservation Act (Williamson Act) contracts, a program designed to prevent premature conversion of farmland to residential or other urban uses. As shown in **Table 3.2-2**, as of January 1, 2015, there were 1,097,727 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County. This total includes 565,200 acres of Williamson Act prime, 521,376 acres nonprime, and 11,152 acres of Farmland Security Zone lands.[9]

Table 3.2-2. 2015 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts[10]

Williamson Act (Acres)		Farmland Security Zone – Urban| (Acres)		Total (Acres)
Prime	Nonprime	Prime	Nonprime	
565,200	521,376	11,102	50	1,097,727

Forest Lands

"Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests."[11]

3.2.4 Existing Conditions

Important Farmland

According to the Important Farmland maps prepared by the California Department of Conservation and as shown on **Figure 3.2-1**, the entire Project site is designated as Farmland of Local Importance. "Farmland of Local Importance is land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production; but does not meet the criteria of Prime, Statewide or Unique Farmland."[12]

Williamson Act Contract Lands

With the exception of APNs 321-070-014, 321-070-026 and 321-040-011, the entire Project site is under Williamson Act contracts.

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[9] California Department of Conservation. The California Land Conservation Act's 2016 Status Report. December 2016. https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf. Accessed February 2020.

[10] Ibid.

[11] Tulare County General Plan 2030 Update, Recirculated DEIR (SCH # 2006041162), February 2010, page 3.10-13.

[12] California Department of Conservation. Farmland of Local Importance. https://www.conservation.ca.gov/dlrp/fmmp/Documents/Farmland_of_Local_Importance_2016.pdf. Accessed February 2020.

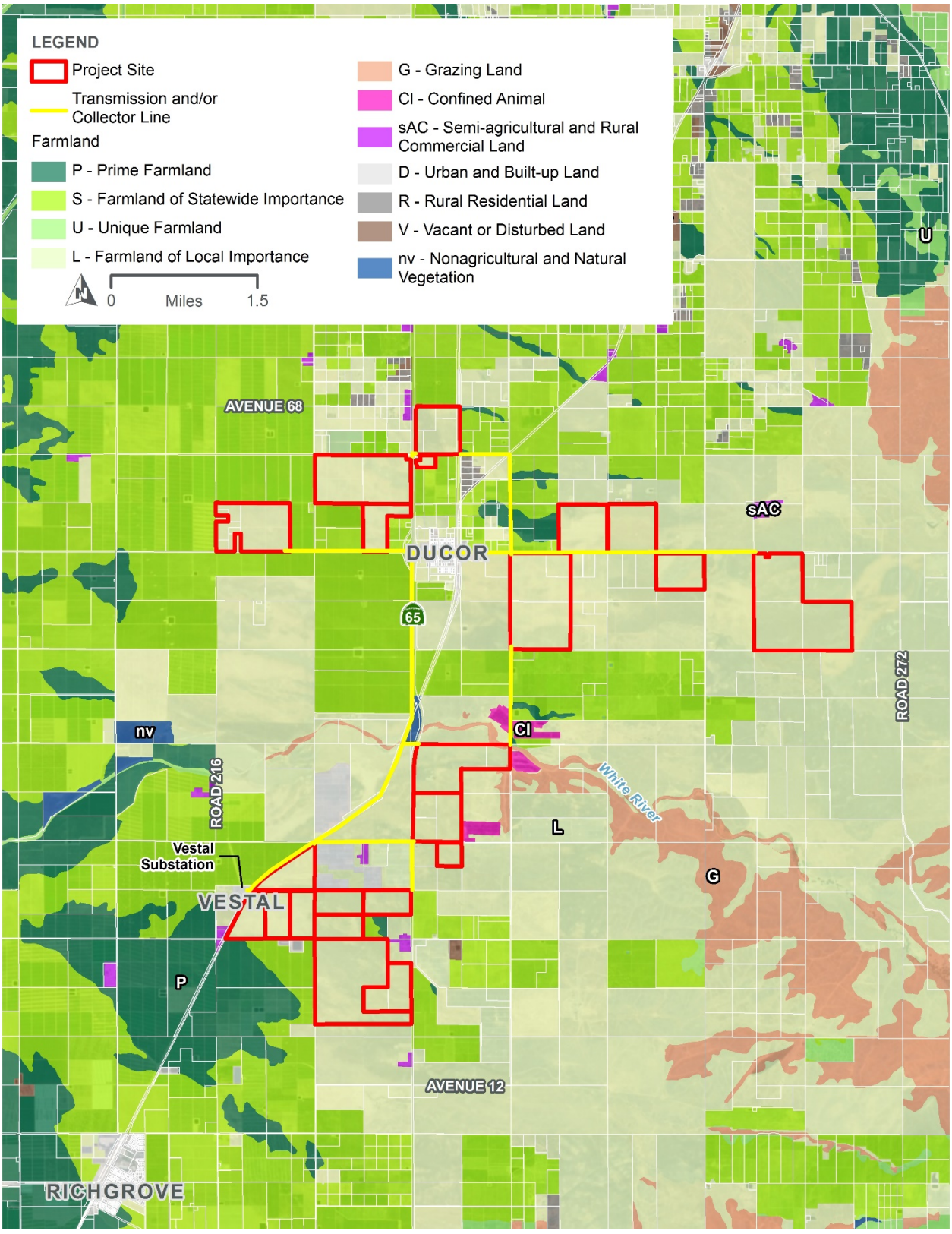
Agricultural Zoning

The majority of the Project site is zoned as AE-40 (Exclusive Agriculture – 40 acre minimum), with exception of the northernmost parcels (APN Nos. 321-040-007, -008, -011, and -025) which are zoned AE-10 (Exclusive Agriculture – 10 acre minimum).

Forest Lands

As the proposed Project is located on the Valley floor, there are no timberland or forestry resources within the Project site or immediate vicinity.

Figure 3.2-1. FMMP Farmland Designation



3.2.5 Regulatory Setting

Federal

Farmland Protection Policy Act (FPPA)

"The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the Federal Government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land."[13]

U.S. Forest Service

The U.S. Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies.[14]

State

California Department of Conservation: Farmland Mapping and Monitoring Program

"The California Department of Conservation (DOC), under the Division of Land Resource Protection, has developed the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the "Important Farmland Series Maps" every two years."[15]

The map series identifies eight classifications, as defined below, and uses a minimum mapping unit size of 10 acres.

- Prime Farmland has 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 4 years prior to the mapping date.
- Farmland of Statewide Importance is 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 4 years prior to the mapping date.

[13] United States Department of Agriculture. Natural Resources Conservation Service. https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/. Accessed February 2020.

[14] U.S. Forest Service, "About Us – Meet the Forest Service", http://www.fs.fed.us/aboutus/meetfs.shtml. Accessed February 2020.

[15] Tulare County General Plan 2030 Update, Background Report. February 2010. Page 4-14.

- Unique Farmland consists of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- Farmland of Local Importance is land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
- Urban and Built-up Land is occupied by structures with a building density of at least one unit to 1.5 acre, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, prisons, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
- Water is defined as perennial water bodies with an extent of at least 40 acres.
- Other Land is land not included in any other mapping category. Common examples include low density rural developments, vegetative and riparian areas not suitable for livestock grazing, confined animal agriculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. More detailed data on these uses is available in counties containing the Rural Land Use Mapping categories.[16]

Williamson Act: California Land Conservation Act of 1965

"The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the "Williamson Act", enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971."[17]

California Department of Forestry and Fire Protection (CAL FIRE)

"CAL FIRE's mission emphasizes the management and protection of California's natural resources; a goal that is accomplished through ongoing assessment and study of the State's natural resources and an extensive CAL FIRE Resource Management Program. CAL FIRE oversees enforcement of California's forest practice regulations, which guide timber harvesting on private lands. Reviews and inspections ensure protection of watershed and wildlife, as well as renewal of timber resources. Department foresters and fire personnel work closely to encourage and implement fuels management projects to reduce the threat of uncontrolled wildfires. CAL FIRE Foresters promote conservation and

[16] California Department of Conservation. Important Farmland Categories. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx. Accessed February 2020.

[17] Ibid. Pages 4-15 - 4-16.

the importance of our trees and forests to Californians of all ages. CAL FIRE manages eight Demonstration State Forests that provide for commercial timber production, public recreation, and research and demonstration of good forest management practices. Additional forestry programs include urban forestry, archaeology, pest management, etc."[18]

Local

Tulare County General Plan

The Tulare County General Plan has policies that apply to projects within Tulare County that serve to protect farmland. General Plan policies that are generally applicable to the proposed Project are listed below:

AG-1.3 Williamson Act. The County should promote the use of the California Land Conservation Act (Williamson Act) on all agricultural lands throughout the County located outside established Urban Development Boundaries (UDBs). However, this policy carries with it a caveat that support for the Williamson Act as a tax reduction component is premised on continued funding of the State subvention program that offsets the loss of property taxes.

AG-2.11 Energy Production. The County shall encourage and support the development of new agricultural related industries featuring alternative energy, utilization of agricultural waste, and solar or wind farms.

3.2.6 Impact Evaluation

Would the Project:

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?

Project Impact Analysis: ***No Impact***

Pursuant to Public Resources Code Section 21060.1, "Agricultural land" is defined as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland as defined by the United States Department of Agriculture land inventory and monitoring criteria.

As shown on **Figure 3.2-1**, the Project site is not designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. According to the Important Farmland maps prepared by the California Department of Conservation and as shown on **Figure 3.2-1**, the entire Project site is designated as Farmland of Local Importance. It should be noted that analysis of Farmland of Local Importance is not required under CEQA significance criteria, as this designation is not considered an "Agricultural land" per Public Resources Code Section 21060.1.

The proposed Project could result in the conversion of Farmland of Local Importance to non-agricultural use (solar farm). However, the potential conversion will be limited for two reasons: 1) the proposed Project will not introduce a non-agricultural use that is sensitive to or incompatible with agricultural operations that will occur nearby; and 2) at the end of its operating life, infrastructure associated with the solar facility will be removed, which will allow the proposed solar facility site to return to agricultural use, via a Decommissioning and Reclamation Plan which will

[18] California Department of Forestry and Fire Protection. About Cal Fire. https://www.fire.ca.gov/about-us/. Accessed February 2020.

be a condition of approval, as described in Chapter 2. The gen-tie/collector line will be located along existing roadway right-of-ways and will not impact any farmlands. Based on these considerations, ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map provided by the California Department of Conservation.

As previously discussed above, the Project site is not designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. The entire Project site is designated as Farmland of Local Importance, which is not considered an "Agricultural land" per Public Resources Code Section 21060.1. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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

Project Impact Analysis: ***Less than Significant Impact***

The Project site is zoned as AE-40 (Exclusive Agricultural Zone – 40 Acre Minimum) and AE-10 (Exclusive Agriculture – 10 acre minimum). Additionally, with the exception of APNs 321-070-014, 321-070-026 and 321-040-011, the entire Project site is under Williamson Act contracts. The Williamson Act enables local governments to enter into contracts with private landowners that restrict land use to agricultural or related uses in return for lower property tax assessments. Local governments are responsible for the implementation of this program; therefore, the rules that determine compatible uses within a contract vary by jurisdiction.

The Tulare County Board of Supervisors defined allowable uses on contracted lands in Resolution No. 89-1275, which established Uniform Rules for Agricultural Use. Resolutions No. 89-1275 and No. 99-0620 established the construction of gas, electric, water, and community utility facilities as compatible uses for lands under a Williamson Act contract. Public and private utility structures were determined to be a compatible use on lands under a Williamson Act contract with Resolution No. 2010-0717. Under Resolution No. 2010-0590, the Tulare County Board of Supervisors determined that solar generating facilities are a compatible use in Exclusive Agricultural Zone Districts subject to conditions of approval set forth in Special Use Permits.

Resolutions No. 2010-0717 and No. 2013-0104 subsequently created a two-level process through which solar facility PROJECTs can be found as a compatible use on Williamson Act contracted lands. This allows impaired agricultural lands to be put to the highest and best use without cancelling the Williamson Act contract, therefore preserving the option to return to farming the land in the future. Pending the approval of the Special Use Permit for the proposed Project and the approval of findings of compatibility under the Williamson Act, the Project will present a temporary change in land use that has been found to be compatible with the terms of the existing Williamson Act contract on the Project site. Therefore, the proposed Project will not conflict with existing zoning or a Williamson Act Contract and a ***Less than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

While the majority of the Project site is under Williamson Act contracts, it is not anticipated that the proposed Project will cause the conversion or cancellation of existing contracts. As noted earlier, the proposed Project is consistent with Tulare County of Board of Supervisors Resolutions noted earlier (and contained in their entirety in Appendix "B" of this EIR) for the Exclusive Agriculture zone classification subject to approval of a Special Use Permit. Cumulative impacts related to this Checklist Item will be ***Less than Significant.***

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Less than Significant Project-specific or Cumulative Impacts related to this resource will occur.

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))?

Project Impact Analysis: ***No Impact***

The Project site and surrounding areas are located in the Valley portion of Tulare County and have agricultural zoning. The area contains no lands zoned or identified as forest land or timberland. The Project site is zoned as AE-40 (Exclusive Agricultural Zone – 40 Acre Minimum) and AE-10 (Exclusive Agriculture – 10 acre minimum). The proposed Project will not conflict with existing zoning for forest land or cause rezoning of forest land. As such, ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project is not located within a forestland zone or will require the change of a forestland zone. As such, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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

Project Impact Analysis: ***No Impact***

As previously discussed above, the proposed Project is not located within a forestland zone or will require the change of a forestland zone. As such, ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As previously discussed above, the proposed Project is not located within a forestland zone or will require the change of a forestland zone. As such, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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?

Project Impact Analysis: ***Less than Significant Impact***

The Project site is not located near land zoned as forest land or timberland and therefore will not result in any changes in the environment that might convert forest land to non-forest land.

The proposed Project will result in the use of approximately 3,614 acres of farmland to a non-agricultural use for approximately 35 years. However, as discussed earlier, this conversion is planned as temporary and in accordance with existing land use policies and regulations adopted via plans, zoning, and resolutions by the Tulare County Board of Supervisors (as noted earlier). The land in the immediate vicinity of the proposed Project includes cultivated and uncultivated farmlands. As discussed in Chapter 2 Project Description, construction-, operation-, maintenance-, and decommissioning-related activities will take place within the Project site boundaries. The proposed Project is not anticipated to significantly result in changes to or impact the environment compared to those from agricultural-related activities. Additionally, during construction- and decommissioning-related activities, Best Management Practices such as erosion prevention measures and dust-minimization measures (including those required by the San Joaquin Valley Air Pollution Control District) will be implemented to minimize or avoid the impact of the proposed Project (both locally and regionally). Maintenance activities during Project operation will be minimal and limited to replacing broken facility components and periodically washing the panels. Therefore, no other changes to the environment are anticipated that could result in the conversion of farmland to non-farmland. As such, the Project will result in a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted above, the proposed Project will not result in any changes in the environment that might convert forest land to non-forest land. The proposed Project will temporarily convert Farmland of Local Importance to a non-agricultural use (solar energy facility). However, the proposed Project is not anticipated to significantly result in changes to or impact the environment compared to those from agricultural-related activities. As noted earlier, construction-, operation-, maintenance, and decommissioning-related activities will take place within the Project site boundaries. Therefore, cumulative impacts related to this Checklist Item will be ***Less than Significant.***

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, ***Less than Significant Project-specific or Cumulative Impacts*** related to this resource will occur.

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3.3 Air Quality

3.3.1 Summary of Findings

The proposed Project will result in a ***Less Than Significant Impact*** related to Air Quality. The impact analyses and determinations in this section are based upon information obtained from the "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study"* prepared by Rincon Consultants, Inc., provided in Appendix "C" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.3.2 Introduction

CEQA Requirements

This section of the Draft Environmental Impact Report (EIR) addresses potential impacts to Air Quality. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in CEQA Guidelines Section 15126.2(a), "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Air Quality in the County. The Regulatory Setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update (General Plan), Tulare County General Plan 2030 Update Background Report (Background Report), and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines, Section 15126.2(a).

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions and by the San Joaquin Valley Air Pollution Control District (Air District or SJVAPCD) significance thresholds identified in their guidance document *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI).[2] The following are potential thresholds for significance:

- Result in an exceedance of San Joaquin Valley Air Pollution Control District criteria pollutant threshold.
- Result in an exceedance of criteria pollutants as established in the 1990 Clean Air Act amendments.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under an applicable federal or state ambient air quality standard.
- Result in exposure of sensitive receptors to emissions of toxic air contaminants (TAC).
- Result in other emissions (such as those leading to nuisance odors) adversely affecting a substantial number of people.

3.3.3 Environmental Setting

San Joaquin Valley Air Basin (SJVAB)

"Tulare County falls within the southern portion of the San Joaquin Valley Air Basin (SJVAB), which is bordered on the east by the Sierra Nevada range, on the west by the Coast Ranges, and on the south by the Tehachapi Mountains. These features restrict air movement through and out of the SJVAB.

The topography of Tulare County significantly varies in elevation from its eastern to western borders, which results in large climatic variations that ultimately affect air quality. The western portion of the County is within the low-lying areas of the SJVAB. This portion of the County is much dryer in comparison to the eastern portion that is located on the slopes of the Sierra Nevada Mountains. The higher elevation contributes to both increased precipitation and a cooler climate.

Wind direction and velocity in the eastern section varies significantly from the western portion of the County. The western side receives northwesterly winds. The eastern side of the County exhibits more variable wind patterns, but the wind direction is typically up-slope during the day and downslope in the evening. Generally, the wind direction in the eastern portion of the County is westerly; however terrain differences can create moderate directional changes."[3]

Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This gradient of cooler air over warm air is known as the environmental lapse rate. Inversions occur when warm air sits over cooler air, trapping the cooler air near the ground. These inversions trap pollutants from dispersing vertically and the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the San Joaquin Valley Air Basin in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,500 feet during the winter. The result is a

[2] San Joaquin Valley Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts. https://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf. Accessed February 2020.

[3] Tulare County General Plan 2030 Update RDEIR. Page 3.3-9. http://generalplan.co.tulare.ca.us/

relatively high concentration of air pollution in the valley during inversion episodes. These inversions cause haziness, which in addition to moisture may include suspended dust, a variety of chemical aerosols emitted from vehicles, particulates from wood stoves, and other pollutants. In the winter, these conditions can lead to carbon monoxide "hotspots" along heavily traveled roads and at busy intersections. During summer's longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOx), which results in the formation of ozone.[4]

"The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone and PM_{10} emission standards for many years."[5] As of February 2020, the SJVAB is in nonattainment for federal and state ozone and $PM_{2.5}$ standards, attainment for federal PM_{10} standards, and nonattainment for state PM_{10} standards.[6]

"Unlike other air basins in California, the pollution in the San Joaquin Valley Air Basin (SJVAB) is not produced by large urban areas. Instead, emissions are generated by many moderate sized communities and rural uses. Emission levels in the Central Valley have been decreasing overall since 1990. This can be primarily attributed to motor vehicle emission controls that reduce the amount of vehicle emissions and controls on industrial/stationary sources. In spite of these improvements, the San Joaquin Valley is still identified as having some of the worst air quality in the nation.

The main source of CO and NOx emissions is motor vehicles. The major contributors to ROG emissions are mobile sources and agriculture. ROG emissions from motor vehicles have been decreasing since 1985 due to stricter standards, even though the vehicle miles have been increasing. Stationary source regulations implemented by the SJVAPCD have also substantially reduced ROG emissions. ROG from natural sources (mainly from trees and plants) is the largest source of this pollutant in Tulare County. Atmospheric modeling accomplished for recent ozone planning efforts has found that controlling NOx is more effective at reducing ozone concentrations than controlling ROG. However, controls meeting RACT and BACT are still required for SJVAPCD plans.

The SJVAB has been ranked the 2nd worst in the United States for O_3 levels, even though data shows that overall O_3 has decreased between 1982 and 2001.

Direct PM_{10} emissions have decreased between the years 1975 and 1995 and have remained relatively constant since 2000. The main sources of PM_{10} in the SJVAB are from vehicles traveling on unpaved roads and agricultural activities. Regional Transportation Planning Agencies must implement BACM for sources of fine particulate matter (PM_{10}) to comply with federal attainment planning requirements for PM_{10}."[7]

[4] San Joaquin Valley Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts, Chapter 2; and Air Quality Guidelines for General Plan, Chapter 2, http://www.valleyair.org/transportation/Entire-AQGGP.pdf. Accessed February 2020.

[5] Tulare County General Plan 2030 Update RDEIR. Page 3.3-9.

[6] San Joaquin Valley Air Pollution Control District. http://www.valleyair.org/aqinfo/attainment.htm. Accessed February 2020.

[7] Tulare County 2030 General Plan 2030 Update, Part 1 Goals and Policies Report. Pages 9-4 to 9-5.

Air Pollutants of Concern

Ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving precursor organic compounds (POC) and nitrogen oxides (NO_X). POC and NO_X are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of POC and NO_X under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with summertime temperature inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone. Exposure to elevated ozone concentrations can cause eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is an air quality pollutant of concern because it acts as a respiratory irritant. NO_2 is a major component of the group of gaseous nitrogen compounds commonly referred to as NO_X. A precursor to ozone formation, NO_X is produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, NO_X emitted from fuel combustion is in the form of nitric oxide (NO) and NO_2. NO is often converted to NO_2 when it reacts with ozone or undergoes photochemical reactions in the atmosphere. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of the air on high pollution days, especially in conjunction with high ozone levels.

Carbon Monoxide. Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease.

Particulate Matter. Particulates less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$) can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. According to a study by the California Air Resources Board (CARB), exposure to ambient $PM_{2.5}$ can be associated with approximately 7,300 to 11,000 annual premature deaths statewide (CARB 2010). Particulates also can damage materials and reduce visibility. Research has indicated that there are associations between increased levels of

ambient particulate matter and increased adverse respiratory health. For PM_{10}, there are associations between particulate levels and decreased pulmonary function, increased number of asthma attacks, increased asthma medication usage, increased emergency room visits, and hospital admissions for respiratory illness, and increased daily mortality (CARB 2004).

Other Criteria Pollutants. Sulfur dioxide (SO_2) is a combustion product of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (both PM_{10} and $PM_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead has a range of adverse neurotoxic health effects and was formerly released into the atmosphere primarily via the combustion of leaded gasoline. The use of leaded gasoline ceased in the United States after 1995, resulting in decreasing levels of atmospheric lead.

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of ozone are referred to and regulated as reactive organic gases (ROG). Sources of ROGs include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint. The primary health effects of ROGs result from the formation of ozone and its related health effects."[8]

Toxic Air Contaminants

"In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are another group of pollutants of concern. Assembly Bill 1807 (AB 1807) sets forth a procedure for the identification and control of TACs in California. CARB defines a TAC as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. Because no safe levels of TACs can be determined, there are no ambient air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. Although construction activity is short-lived, it may increase TAC concentrations in the short term at nearby sensitive receptors. A common source of TAC emissions during construction activities is diesel particulate matter (DPM) due to the operation of diesel-powered equipment and heavy-duty trucks."[9]

Diesel Particulate Matter

"Diesel engine fuel combustion forms an important fraction of the particulate matter emission inventory, as particulates in diesel emissions are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. The Office of Environmental Health Hazard Assessment (OEHHA) reviewed and evaluated the potential for diesel exhaust to affect human health, and the associated scientific uncertainties. Based on the available scientific evidence, it was determined that a level of DPM exposure has not been identified, below which no carcinogenic effects are anticipated. The Scientific Review Panel that approved the OEHHA report determined that, based on studies to date, 3 x 10-4 micrograms per cubic meter (µg/m3) is a reasonable estimate of the unit risk for DPM. This means that a person exposed to a DPM concentration of 1 µg/m3 continuously over the course of a lifetime has a 3 per 10,000 chance (or 300 in one million chance) of contracting cancer due to this exposure.

[8] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Pages 7-9. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

[9] Ibid. Page 9.

In 2000, the statewide estimated average concentration of diesel PM was 1.26 µg/m3 for indoor and outdoor ambient air. If DPM concentrations remained the same, about 380 excess cancers per one million population could be expected (CARB 2000). Therefore, CARB has determined that these particulate emissions are a TAC. DPM emissions are estimated to be responsible for about 70 percent of the total ambient statewide air toxics risk. DPM can also be responsible for elevated localized or near-source exposures ("hot-spots"). Depending on the activity and nearness to receptors, these potential risks are as high as 1,500 per million or more (CARB 2000). CARB staff have conducted risk characterization scenarios to determine the potential excess cancer risks involved when individuals are near various sources of diesel engine emissions, ranging from school buses to high volume freeways. The purpose of the risk characterization was to estimate, through air dispersion modeling, the cancer risk associated with typical diesel-fueled engine or vehicle activities based on modeled PM concentration at the point of maximum impact. The study included various sources of DPM emissions, including idling school buses, truck stops, low- and high-volume freeways, and other sources. High-volume freeways (20,000 or more trucks per day) were estimated to cause 800-1,700 per million potential excess cases of cancers, while low-volume freeways (2,000 or fewer trucks per day) were estimated to cause about 100-200 per million potential excess cases of cancers statewide (CARB 2000)."[10]

Naturally Occurring Asbestos

"Naturally occurring asbestos can be found in serpentine rock, and its parent material, ultramafic rock. The rock types are abundant in the Sierra foothills and have been identified in Tulare County. As shown in Figure 7-2 of the Porterville Area Community Plan, the Project site is not located in an area with ultramafic rocks, which are more likely to contain naturally occurring asbestos."[11]

SJVAB Attainment Status

The United States Environmental Protection Agency (EPA or USEPA) and the California Air Resources Board (ARB or CARB) designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." The federal non-attainment designation is subdivided into five categories (listed in order of increasing severity): marginal, moderate, serious, severe, and extreme. The degree of an area's non-attainment status reflects the extent of the pollution and the expected time period required in order to achieve attainment.

Designated non-attainment areas are generally subject to more stringent review by ARB and EPA. In the endeavor to improve air quality to achieve the standards, projects are subject to more stringent pollution control strategies and requirements for mitigation measures (such as mobile source reduction measures). If the National Ambient Air Quality Standards (NAAQS) are not achieved within the specified timeframe, federal highway funding penalties (and a federally administered implementation plan incorporating potentially harsh measures to achieve the NAAQS) will result.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient

[10] Ibid. Pages 9-10.

[11] Ibid. Page 31.

air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

Table 3.3-1 identifies the current federal and state attainment designations for the SJVAB.

Table 3.3-1. SJVAB Attainment Status

Pollutant	Designation Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard[1]	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Extreme[2]	Nonattainment
PM_{10}	Attainment[3]	Nonattainment
$PM_{2.5}$	Nonattainment[4]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

[1] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

[2] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

[3] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM_{10} Maintenance Plan.

[4] The Valley is designated nonattainment for the 1997 $PM_{2.5}$ NAAQS. EPA designated the Valley as nonattainment for the 2006 $PM2_{.5}$ NAAQS on November 13, 2009 (effective December 14, 2009).

Source: San Joaquin Valley Unified Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aginfo/attainment.htm

3.3.4 Existing Conditions

Ambient Air Quality

"The SJVAPCD operates a regional monitoring network that measures the ambient concentrations of criteria pollutants. Existing and probable future general levels of air quality in the Air Basin can normally be inferred from ambient air quality measurements conducted by SJVAPCD at its monitoring stations. The major criteria pollutants of concern in the Central Valley (i.e., ozone, PM_{10}, and $PM_{2.5}$) are monitored at several locations. Background ambient concentrations of pollutants are determined by pollutant emissions in a given area, as well as wind patterns and meteorological conditions for that area.

The closest SJVAPCD monitoring station to the Project site is the Porterville station at 1839 Newcomb Street, which is approximately 7.8 miles north of the Project site. The Porterville station monitors ozone and $PM_{2.5}$. **Table 3.3-2** shows a five-year summary of data collected at the Porterville station compared to National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). As of 2019, at the Porterville station, the state one-hour ozone standard and the state and national eight-hour ozone standards were exceeded for multiple days from 2014-2018. The national $PM_{2.5}$ 24-hour standard and the state annual average $PM_{2.5}$ standard were also exceeded for multiple days from 2014-2018. Because annual average $PM_{2.5}$ data for 2014-2017 and PM_{10} data is not available from the Porterville monitoring station, data for these pollutants has been taken from the next closest available monitoring station, the Visalia-N Church Street monitoring station, located approximately 25 miles south of the Project site. Because monitoring is not generally conducted for pollutants that are no longer likely to exceed ambient air quality standards, there is no recent monitoring data available for CO or SO_2. Additionally, there was no monitoring data available for hydrogen sulfide, vinyl chloride, or other toxic air contaminants in Tulare County or any nearby counties. As shown in **Table 3.3-2**, the average annual $PM_{2.5}$ standards in 2018 were exceeded and the PM_{10} standards were exceeded for multiple days from 2014-2018. Neither of the NO_2 standards were exceeded from 2014-2018.

Table 3.3-2. Ambient Air Quality at the Porterville Monitoring Station[12]

Pollutant	Standard	Monitoring Data by Year				
		2014	2015	2016	2017	2018
Ozone, O_3						
Highest 1-Hour Average, ppm		0.085	**0.100**	**0.106**	**0.100**	**0.093**
Days over State Standard	0.09 ppm	0	4	9	4	0
Highest 8-Hour Average, ppm		**0.074**	**0.091**	**0.092**	**0.090**	**0.085**
Days over State/National Standards [a]	0.070 ppm	4	41	80	34	36
Fine Particulate Matter, $PM_{2.5}$						
Highest 24-Hour Average, µg/m^3		**78.2**	**82.6**	**63.9**	**72.3**	**77.4**
Days over National Standard [b]	35 µg/m^3	–	–	–	–	–
Annual Average, µg/m^3		**17.9**	–	**15.6**	**16.8**	**16.4**

[12] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Table 2. Page 12. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

Table 3.3-2. Ambient Air Quality at the Porterville Monitoring Station[12]

Pollutant	Standard	Monitoring Data by Year				
		2014	2015	2016	2017	2018
Exceed State/National Standards?	12 µg/m^3	Yes	–	Yes	Yes	Yes
Respirable Particulate Matter, PM_{10}[c]						
Highest 24-Hour Average State/National, µg/m^3		**104.2/** 102.4	**140.3/** 67.3	**132.5/** 137.1	**145.7/** 144.8	**159.6/ 153.4**
Measured days over State/National Standard [b]	50/150 µg/m^3	17/0	67/0	95/0	131/0	162/0
Annual Average (State), µg/m^3		–	–	–	**46.9**	**52**
Exceed State Standards?	20 µg/m^3	–	–	–	Yes	Yes
Carbon Monoxide, CO[d]						
Highest 1-Hour Average, ppm		ND	ND	ND	ND	ND
Highest 8-Hour Average, ppm		ND	ND	ND	ND	ND
Nitrogen Dioxide, NO_2[c]						
Highest 1-Hour Average State/National, ppb		64/64.5	62/62.3	57/57.5	58/58.1	69/69.2
Days over State/National Standard	180/100 ppb	0	0	0	0	0
Annual Average, ppb		10	9	–	10	10
Exceed State/National Standards?	30/53 ppb	No	No	–	No	No
Sulfur Dioxide, SO_2[d]						
Highest 1-Hour Average, ppm		ND	ND	ND	ND	ND
Highest 24-Hour Average, ppm		ND	ND	ND	ND	ND

Generally, state and national standards are not to be exceeded more than once per year. Values in **bold** are in excess of applicable standard; ppm = parts per million; µg/m^3 = micrograms per cubic meter; ND = no data; and "–" means there was insufficient data available to determine the value. All data were collected from the Porterville station located at 1839 Newcomb Street unless otherwise noted.

[a] USEPA implemented a new eight-hour ozone standard of 70 ppb (or 0.070 ppm) in October 2015 that is consistent with the state standard. All listed exceedances are based on this standard.

[b] Measurements of $PM_{2.5}$ are usually collected every 1 to 3 days. Number of days exceeding the standards is a mathematical estimation of the number of days concentrations would be greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standards; a "—" indicates that there was not enough data for the mathematical estimation.

[c] Because annual average $PM_{2.5}$ data for 2014-2017, PM_{10} and NO_2 data is not available from the Porterville monitoring station, data for these pollutants has been taken from the next closest available monitoring station, the Visalia-N Church Street monitoring station.

[d] Because monitoring is not generally conducted for pollutants that are no longer likely to exceed ambient air quality standards, there is no recent monitoring data available for CO or SO_2.

As required by the federal Clean Air Act (CAA), the United States Environmental Protection Agency (USEPA) has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. To protect human health and the environment, the USEPA has set "primary" and "secondary" maximum ambient standards for each of the criteria pollutants. Primary standards were set to protect human health, particularly sensitive individuals such as children, the elderly, and individuals suffering from chronic

lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards (CAAQS) for most of the criteria air pollutants. If ambient air quality concentrations of the pollutants of concern are below the NAAQS and CAAQS standards, then health impacts are not anticipated. However, when concentrations of the air pollutants exceed the NAAQS and CAAQS standards, the health impacts are considered to vary based on the level of exceedance. The USEPA has established the Air Quality Index (AQI) to characterize health impacts based on the ambient air concentrations of a given pollutant (USEPA 2019). Based on the USEPA's AQI calculator, an AQI for each of the pollutants that exceeded NAAQS between 2014-2018 was established using the highest concentration recorded by local air monitoring stations. The highest 1-hour ozone concentration of 106 ppb generated an AQI below 100 which is not reported under USAEPA's AQI scale for 1-hour ozone concentrations. The highest 8-hour ozone concentration of 92 ppb that occurred is a 166 on the AQI scale and is considered unhealthy for all groups. The highest 24-hour average $PM_{2.5}$ concentration of 82.6 is a 165 on the AQI scale and is considered unhealthy for all groups. The highest 24-hour average PM_{10} concentration of 159.6 is a 103 on the AQI scale and is considered unhealthy for sensitive groups such as people with respiratory disease. **Table 3.3-3** summarizes the AQI and health effects for the criteria pollutants that exceeded NAAQS between 2014-2018 near the project site."[13]

Table 3.3-3. Air Quality Index and Health Effects[14]

Pollutant	Air Quality Index	Health Effects Description
Ozone, O_3		
Highest 8-Hour Average	166-Unhealthy	Sensitive groups include children and people with asthma. Health impacts include a greater likelihood of respiratory symptoms and breathing difficulty in active children/adults and people with respiratory disease, such as asthma; there is the possibility of respiratory effects in the general population. Sensitive groups should avoid prolonged outdoor exertion while everyone else should limit prolonged outdoor exertion.
Fine Particulate Matter, PM2.5		
Highest 24-Hour Average	165-Unhealthy	Sensitive groups include people with respiratory or heart disease, the elderly and children. Health impacts include increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly as well as increased respiratory effects in the general population. Sensitive groups should avoid prolonged exertion and the general population to should limit prolonged exertion.
Fine Particulate Matter, PM10		
Highest 24-Hour Average	103-Unhealthy for Sensitive Groups	Sensitive groups include people with respiratory disease. Health impacts include increased likelihood of respiratory symptoms and aggravation of lung disease, such as asthma. Sensitive groups should limit outdoor exertion
AQI presented is based on the highest concentration recorded between 2014-2018. Source: USEPA 2019		

[13] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Pages 11 and 13. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

[14] Ibid. Page 14.

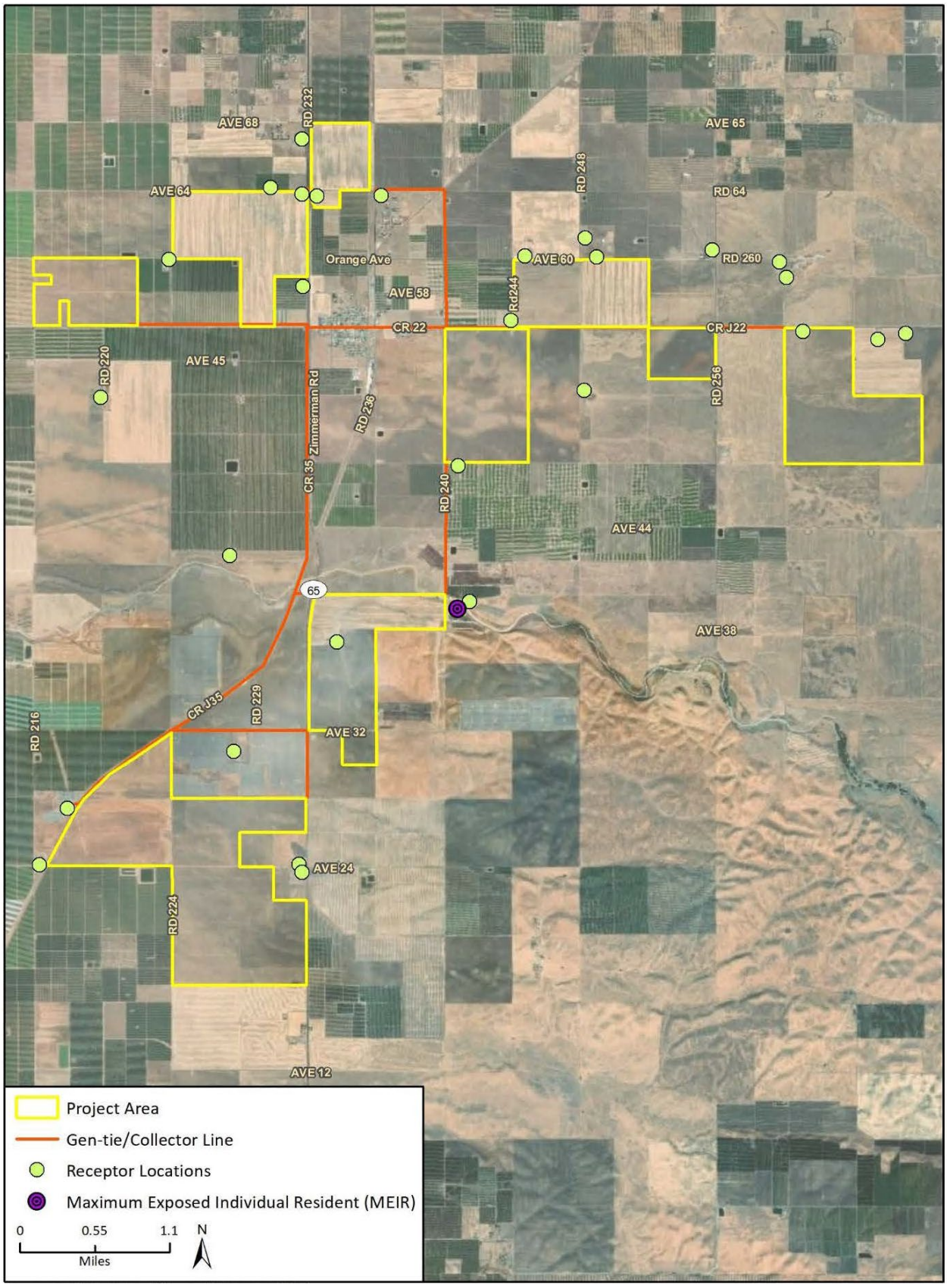
Sensitive Receptors

The SJVAPCD considers hospitals, schools, parks, playgrounds, daycare centers, nursing homes, convalescent facilities, and residential areas as sensitive receptors.[15]

The sensitive receptors with the highest potential to be affected by the Project include residential land uses located in the community of Ducor, within one mile (5,280 feet) of the Project site. While there are several agricultural properties adjacent to the Project site, there are four rural residences located within 500 feet of the Project site. The nearest sensitive receptor to the Project site is a rural residence located approximately 90 feet southwest of the Project Site boundary across Road 224. **Figure 3.3-1** shows the identified receptor locations nearest the project boundary.

[15] San Joaquin Valley Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts. Page 39. https://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf. Accessed February 2020.

Figure 3.3-1. Sensitive Receptor Locations



3.3.5 Regulatory Setting

Federal

Federal Clean Air Act

"The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)… for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM_{10}] and less than 2.5 microns in diameter [$PM_{2.5}$]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called "non-attainment areas." The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can "bump up" the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register."[16]

Table 3.3-4 lists the current federal standards for regulated pollutants.

Table 3.3-4. Federal and State Ambient Air Quality Standards[17]

Pollutant	Averaging Time	State Standard Concentration	National Standard Concentration
Ozone	8-Hour 1-Hour	0.070 ppm 0.090 ppm	0.070 ppm –
Carbon Monoxide	1-Hour 8-Hour	9.0 ppm 20 ppm	9.0 ppm 35 ppm

[16] Tulare County General Plan 2030 Update REIR. Pages 3.3-1 to 3.3-2.

[17] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Table 3. Page 14. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

Table 3.3-4. Federal and State Ambient Air Quality Standards[17]

Pollutant	Averaging Time	State Standard	National Standard
		Concentration	Concentration
Nitrogen Dioxide	1-Hour Annual	0.180 ppm 0.030 ppm	0.100 ppm 0.053 ppm
Sulfur Dioxide	1-Hour 3-Hour 24-Hour Annual	0.25 ppm – 0.04 ppm –	0.075 ppm 0.5 ppm* 0.14 ppm 0.03 ppm
Respirable Particulate Matter (PM_{10})	24-Hour Annual	50 μg/m^3 20 μg/m^3	150 μg/m^3 –
Fine Particulate Matter ($PM_{2.5}$)	24-Hour Annual	– 12 μg/m^3	35 μg/m^3 12 μg/m^3
Hydrogen Sulfide	1 Hour	0.03 ppm	No Federal Standard
Sulfates	24 Hour	25 μg/m^3	No Federal Standard
Vinyl Chloride	24 Hour	0.010 ppm	No Federal Standard
Lead	30-Day Quarterly	1.5 μg/m^3 –	– 1.5 μg/m^3

ppm = parts per million
ppb = parts per billion
μg/m^3 = micrograms per cubic meter
* Secondary National Standard

State

California Clean Air Act

"The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards (see Table 3.3-1 [of the General Plan RDEIR]), which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California's standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that Air Districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, $PM_{2.5}$, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM_{10} standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards."[18]

"The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts

[18] Tulare County General Plan 2030 Update REIR. Pages 3.3-2 to 3.3-3.

are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts."[19]

Table 3.3-4 lists the current state standards for regulated pollutants.

California Air Resources Board

"The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area's air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local Air Districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA."[20]

California Air Resources Board Airborne Toxic Control Measures

"Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." In 1998, following a 10-year scientific assessment process, ARB identified diesel PM as a toxic air contaminant based on its potential to cause cancer and other health problems, including respiratory illnesses, and increased risk of heart disease. Subsequent to this action, research has shown that diesel PM also contributes to premature deaths. Health risks from diesel PM are highest in areas of concentrated emissions, such as near ports, railyards, freeways, or warehouse distribution centers. Exposure to diesel PM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems.

Both private businesses and public agencies operating stationary prime and emergency standby diesel engines in California are subject to the ATCM. Emergency standby engines are those that are used only when normal power or natural gas service fails or when needed for fire suppression or flood control. Prime engines are those that are not used for emergency standby purposes. Examples of

[19] Ibid. Cit. 3.3-5.

[20] Op. Cit. 3.3-6 to 3.3-7.

businesses that are affected include private schools and universities, private water treatment facilities, hospitals, power generation, communications, broadcasting, building owners, agricultural production, banks, hotels, refiners, resorts, recycling centers, quarries, wineries, dairies, food processing, and manufacturing entities. A variety of public agencies are also affected including military installations, prisons and jails, public schools and universities, and public water and wastewater treatment facilities."[21]

"The ATCM for stationary diesel engines was originally adopted by the Air Resources Board (ARB or Board) at the February 26, 2004, Board Hearing. On November 8, 2004, the Final Regulation Order for the ATCM was approved by the Office of Administrative Law (OAL) and filed with the Secretary of State. The rulemaking became effective December 8, 2004. Among other provisions, the ATCM established emission standards and fuel use requirements for new and in-use stationary engines used in prime and emergency back-up applications (non-agricultural) and for new stationary engines used in agricultural applications.

A modification of the 2004 action was necessary to address the required PM emission standard for new agricultural engines. Therefore, an Emergency Regulatory Amendment was heard at the March 17, 2005 Board Hearing. On April 4, 2005, the Office of Administrative Law approved the amendments to the ATCM which removed the requirement that new stationary agriculture pump engines meet the 0.15g/bhp-hr PM standard. Instead, such engines must meet the appropriate Tier 2 emissions standard. The Board approved a temporary emergency action (Resolution 05-29) to replace the 0.15 g/bhp-hr PM standard for these engines with the appropriate ARB and federal new off-road/nonroad engine certification standards. Following this emergency rulemaking proceeding, ARB conducted another rulemaking in accordance with all procedural requirements of the California Administrative Procedure Act to make a modified version of the emergency amendments permanent at the May 26, 2005 Board Hearing. The final rulemaking package was approved by OAL and filed with the Secretary of the State on September 9, 2005. The regulation became effective that same day.

In November 2006, the Board approved amendments to the ATCM to include requirements for stationary in-use agricultural engines. Additional amendments addressed implementation and compliance issues primarily involving non-agricultural emergency standby and prime engines. These issues included streamlining certain fuel reporting requirements, updating electricity tariff schedules, modifying the definitions of California (CARB) diesel fuel and alternative diesel fuel, an alternative compliance demonstration option to the 0.01 g/bhp-hr diesel PM standard, and a "sell-through" provision to allow stationary diesel-fueled engine wholesalers and retailers to sell (and owners or operators to use) stock engines that do not meet new, more stringent emissions standards when they become effective. The amendments also authorized the Executive Officer or local air district to allow the sale, purchase, or installation of a new stock engine from the previous model year to meet new stationary diesel-fueled engine emission standards, if verifiable information is provided documenting that current mode year engines meeting the new emission standards are not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings. The OAL approved the amendments on September 18, 2007, which became effective October 18, 2007.

In October 2010, the Board approved amendments to the ATCM to more closely align with the emission standards for new stationary diesel-fueled emergency standby engines, including direct drive fire pump engines, and new prime engines with the federal Standards of Performance for Stationary

[21] Frequently Asked Questions. Airborne Toxic Control Measure For Stationary Compression Ignition Engines, Requirements for Stationary Engines Use in Non-Agricultural Applications. California Air Resources Board, Stationary Source Division, Emissions Assessment Branch, May 2011. Pages 2 to 3. Which can be accessed at: http://www.arb.ca.gov/diesel/documents/atcmfaq.pdf.

Compression- Ignition Internal Combustion Engines (NSPS) promulgated July 11, 2006. Amendments to help clarify provisions in the ATCM and address new information, and to remove provisions no longer needed were also approved."[22]

Regional

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (Air District) is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley portion of Kern County. "The Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality management strategies."[23] The Air District's 11 core values include: protection of public health; active and effective air pollution control efforts with minimal disruption to the San Joaquin Valley's economic prosperity; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the San Joaquin Valley; continuous improvement; effective and efficient use of public funds; respect for the opinions and interests of all San Joaquin Valley residents; and robust public outreach and education of the public regarding air quality and the progress made in the Valley. To achieve these core values the Air District has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the Project are listed and described further below.

Ozone Plans

"The *Extreme Ozone Attainment Demonstration Plan*, adopted by the SJVAPCD Governing Board October 8, 2004, sets forth measures and emission-reduction strategies designed to attain the federal one-hour ozone standard by November 15, 2010, as well as an emissions inventory, outreach, and rate of progress demonstration. This plan was approved by the USEPA on March 8, 2010; however, the USEPA's approval was subsequently withdrawn effective November 26, 2012, in response to a decision issued by the U.S. Court of Appeals for the Ninth Circuit (*Sierra Club v. EPA*, 671 F.3d 955) remanding USEPA's approval of these SIP revisions. Concurrent with the USEPA's final rule, CARB withdrew the 2004 plan. The SJVAPCD developed a new plan for the one-hour ozone standard, the *2013 Plan for the Revoked 1-Hour Ozone Standard*, which it adopted in September 2013.

The *2007 Ozone Plan*, approved by CARB on June 14, 2007, demonstrates how the Air Basin would meet the federal eight-hour ozone standard. The *2007 Ozone Plan* includes a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the Air Basin. Additionally, this plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution, and an increase in state and federal funding for incentive-based measures to create adequate reductions in emissions to bring the entire Air Basin into attainment with the federal eight-hour ozone standard (SJVAPCD 2007a).

On April 16, 2009, the SJVAPCD Governing Board adopted the *Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP)* (SJVAPCD 2009). In part, the *2009 RACT SIP* satisfied the commitment by the SJVAPCD for a new reasonably available control technology analysis for the one-hour ozone plan and was intended to prevent all

[22] Ibid. 1 and 2.

[23] Air District website accessed at: http://valleyair.org/General_info/aboutdist.htm#Mission.

sanctions that could be imposed by USEPA for failure to submit a required SIP revision for the one-hour ozone standard. With respect to the eight-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the Air Basin's designation as an extreme ozone nonattainment area), evaluates SJVAPCD rules against new *Control Techniques Guidelines* promulgated since August 2006, and reviews additional rules and amendments that had been adopted by the Governing Board since August 17, 2006, for reasonably available control technology consistency.

The *2013 Plan for the Revoked 1-Hour Ozone Standard* was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013a). Based on implementation of the ongoing control measures, preliminary modeling indicates that the Air Basin will attain the one-hour ozone standard before the final attainment year of 2022 and without relying on long-term measures under the federal CAA Section 182(e)(5) (SJVAPCD 2013).

On June 19, 2014, the Governing Board adopted the *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan* (SJVAPCD 2014) that includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NO_x reduction rules and concludes that they satisfy requirements for stringency, applicability, and enforceability, and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance the Air Basin's ozone attainment. Each ROG rule evaluated in the 2009 RACT SIP has been subsequently approved by the USEPA as meeting RACT within the last two years. The ozone attainment strategy, therefore, focuses on further NO_X reductions.

SJVAPCD adopted the *2016 Ozone Plan for the 2008 8-Hour Ozone Standard* in June 2016. This plan satisfies CAA requirements and ensures expeditious attainment of the 75 parts per billion eight-hour ozone standard (SJVAPCD 2016a)."[24]

Particulate Matter Plans

"In June 2007, the SJVAPCD Board adopted the *2007 PM_{10} Maintenance Plan and Request for Redesignation* (SJVAPCD 2007b). This plan demonstrates how PM_{10} attainment in the Air Basin will be maintained in the future. Effective November 12, 2008, USEPA redesignated the Air Basin to attainment for the PM_{10} NAAQS and approved the 2007 PM_{10} Maintenance Plan (USEPA 2008).

In April 2008, the Air Basin Board adopted the *2008 $PM_{2.5}$ Plan* and approved amendments to Chapter 6 of the *2008 $PM_{2.5}$ Plan* on June 17, 2010 (SJVAPCD 2008). This plan was designed to address USEPA's annual $PM_{2.5}$ standard of 15 µg/m³, which was established by USEPA in 1997. In December of 2012, the SJVAPCD adopted the *2012 $PM_{2.5}$ Attainment Plan*, which addresses USEPA's 24-hour $PM_{2.5}$ standard of 35 µg/m³, which was established by USEPA in 2006 (SJVAPCD 2012). In April 2015, the SJVAPCD Board adopted the *2015 Plan for the 1997 $PM_{2.5}$ Standard* that addresses the USEPA's annual and 24-hour $PM_{2.5}$ standards established in 1997 after the Air Basin experienced higher $PM_{2.5}$ levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions, and the SJVAPCD was unable to meet the initial attainment date of December 31, 2015 (SJVAPCD 2015c).

SJVAPCD adopted the *2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard* on September 15, 2016. This plan addresses the USEPA federal annual $PM_{2.5}$ standard of 12 micrograms per cubic meter

[24] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Pages 20-21. Prepared by Rincon Consultants, Inc. and included in Appendix C" of this EIR.

(µg/m^3), established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment (SJVAPCD 2016b).

SJVAPCD adopted the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards* in November 2018. This plan addresses the USEPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m^3 and the 24-hour $PM_{2.5}$ standard of 65 µg/m^3; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m^3; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m^3. The plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable as required under the federal CAA (SJVAPCD 2018b)."[25]

Criteria Pollutant Emissions

Annual Significance Thresholds. To assess air quality impacts, the Air District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact[26]. The Air District's thresholds of significance for criteria pollutants, which are based on Air District Rule 2201 (New and Modified Stationary Source Review) offset thresholds, are provided in **Table 3.3-5**. According to the Air District's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), "The District identifies thresholds that separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations."[27] SJVAPCD has two sets of significance thresholds for each pollutant for operational emissions depending on whether the activities are for permitted equipment and activities or non-permitted equipment and activities. Project operation does not include permitted equipment or activities such as the use of back-up generators. Therefore, only the operational threshold for non-permitted equipment and activities and construction activities is appropriate for project comparison.

Table 3.3-5. SJVAPCD Air Quality Significance Thresholds – Criteria Pollutants[28]

Pollutant	Construction Thresholds (tpy)	Operations Thresholds (tpy)
NOx	10	10
ROG	10	10
PM_{10}	15	15
$PM_{2.5}$	15	15
SOx	27	27
CO	100	100

tpy = tons per year

[25] Ibid. Page 21.

[26] Air District, Guidance for Assessing and Mitigating Air Quality Impacts. Page 74.

[27] Ibid. Page 75.

[28] Ibid. Page 80.

Ambient Air Quality Screening Tools. In addition to the annual SJVAPCD thresholds outlined above, SJVAPCD has published the *Ambient Air Quality Analysis Project Daily Emissions Assessment* guidance, which is summarized in Section 8.4.2, *Ambient Air Quality Screening Tools*, of the SJVAPCD's *GAMAQI*, adopted in March 2015. The *Ambient Air Quality Screening Tools* guidance provides a screening threshold of 100 pounds per day of any of the following pollutants: NO_X, ROG, PM_{10}, $PM_{2.5}$, SO_X, and CO. The screening threshold was used to evaluate construction activities and operational activities separately. Per SJVAPCD's GAMAQI, when assessing the significance of project-related impacts on air quality, the impacts *may* be significant if on-site emissions from construction or operational activities exceed the 100 pounds per day screening level after implementation of all enforceable mitigation measures. If any one of the criteria pollutants exceeds the 100 pounds per day screening thresholds, an Ambient Air Quality Analysis (AAQA) would be required to determine the significance of project-related impact. An AAQA uses air dispersion modeling to determine if emission increases from a project's construction or operational activities would, in combination with background concentrations, cause or contribute to a violation of the ambient air quality.

SJVAPCD Rules and Regulations[29]

The SJVAPCD enforces regulations and administers permits governing stationary sources. The following regional rules and regulations would apply to the proposed Project:

Regulation VIII (Fugitive PM_{10} Prohibitions) contains rules developed pursuant to USEPA guidance for "serious" PM_{10} nonattainment areas. Rules included under this regulation limit fugitive PM_{10} emissions from the following sources: construction, demolition, excavation, extraction and other earth moving activities, bulk materials handling, carryout and track-out, open areas, paved and unpaved roads, unpaved vehicle/equipment traffic areas, and agricultural sources. **Table 3.3-6** contains control measures that the Applicants will be required to implement during Project construction activities pursuant to Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities.

[29] For a full list of Air District rules and regulations, see their website at: http://www.valleyair.org/rules/1ruleslist.htm.

Table 3.3-6. SJVAPCD Rule 8021 Measures Applicable to the Project

No.	Measure
A.1	Pre-water site sufficient to limit visible dust emissions (VDE) to 20 percent opacity.
A.2	Phase work to reduce the amount of disturbed surface area at any one time.
B.1	Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity; or
B.2	Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity. If using wind barriers, control measure B1 above shall also be implemented.
B.3	Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20 percent opacity and meet the conditions of a stabilized unpaved road surface.
C.1	Restrict vehicular access to the area.
C.2	Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.58 of Rule 8011.
5.3.1	An owner/operator shall limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.
5.3.2	An owner/operator shall post speed limit signs that meet state and federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.
5.4.1	Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20 percent opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.
5.4.2	Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.
6.3.1	An owner/operator shall submit a Dust Control Plan to the Air Pollution Control Officer (APCO) prior to the start of any construction activity on any site that will include ten acres or more of disturbed surface area for residential developments, or five acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the APCO within 10 days prior to the commencement of earthmoving activities via fax or mail. The requirement to submit a dust control plan shall apply to all such activities conducted for residential and non-residential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity.
6.3.3	The Dust Control Plan shall describe all fugitive dust control measures to be implemented before, during, and after any dust generating activity.
6.3.4	A Dust Control Plan shall contain all the [administrative] information described in Section 6.3.6 of this rule. The APCO shall approve, disapprove, or conditionally approve the Dust Control Plan within 30 days of plan submittal. A Dust Control Plan is deemed automatically approved if, after 30 days following receipt by the District, the District does not provide any comments to the owner/operator regarding the Dust Control Plan.

Rule 4101 (Visibility) limits the visible plume from any source to 20 percent opacity.

Rule 4102 (Nuisance) prohibits the discharge of air contaminants or other materials in quantities that may cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public.

Rule 4601 (Architectural Coatings) limits volatile organic compound (VOC) emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) limits VOC emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations and applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Rule 9510 (Indirect Source Review) requires certain development projects to mitigate exhaust emissions from construction equipment greater than 50 horsepower to 20 percent below statewide average NOx emissions and 45 percent below statewide average PM_{10} exhaust emissions. This rule also requires applicants to reduce baseline emissions of NOx and PM_{10} emissions associated with operations by 33.3 percent and 50 percent respectively over a period of 10 years (SJVAPCD 2017b).

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below:

AQ-1.1 Cooperation with Other Agencies. The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards. The County shall partner with the Air District, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

AQ-1.2 Cooperation with Local Jurisdictions. The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts. The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility. The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance. The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-2.2 Indirect Source Review. The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:

1. Providing bicycle access and parking facilities,
2. Increasing density,
3. Encouraging mixed use developments,

4. Providing walkable and pedestrian-oriented neighborhoods,
5. Providing increased access to public transportation,
6. Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and
7. Establishing telecommuting programs or satellite work centers.

AQ-4.2 Dust Suppression Measures. The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

8. Site watering or application of dust suppressants,
9. Phasing or extension of grading operations,
10. Covering of stockpiles,
11. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
12. Revegetation of graded areas.

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions. The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.

3.3.6 Impact Evaluation

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:

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

Project Impact Analysis: ***Less than Significant Impact***

Construction. Construction of the proposed Project will require approximately 12-30 months of continuous activity involving several overlapping phases. Construction was assumed to last for 27 months for the purposes of this analysis.

Construction of the proposed Project will generate air pollutant emissions from entrained dust, off-road equipment use, and vehicle emissions. Off-site emissions will be generated by construction worker daily commute trips and heavy-duty diesel haul and vendor truck trips. Construction emissions could vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Construction of the gen-tie is incorporated into the provided construction schedule and equipment mix. Therefore, emissions associated with the gen-tie are incorporated directly into the impacts associated with construction of the Project.

As shown in **Table 3.3-7**, concurrent construction at all parcels could generate 12.1 tons/year of NO_X and could exceed the NO_X threshold of 10 tons/year in the second year (2022) of construction. This exceedance of the NO_X threshold is largely due to exhaust emissions from off-road

construction equipment. However, the Project will be required to comply with SJVAPCD Rule 9510 (Indirect Source Review), which requires large development projects to reduce exhaust emissions from construction equipment by 20 percent for NO_X and 45 percent for PM_{10} compared to the statewide average. As shown in **Table 3.3-8**, compliance with SJVAPCD Rule 9510 will reduce annual emissions of NO_X to 9.7 tons/year, which will not exceed SJVAPCD's NO_X threshold. No other criteria pollutant threshold will be exceeded during construction with or without adherence to SJVAPCD Rule 9510. This is considered a ***Less than Significant Impact***.

Construction Ambient Air Quality Impact Assessment. The Air Basin is a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. The current air quality in the Air Basin is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., ROG and NO_X for ozone) potentially contribute to poor air quality. Based on the Project's construction schedule and activities, NO_X, CO, and PM_{10} emissions have the potential to exceed SJVAPCD's recommended 100 pounds per day screening threshold during construction, as shown in **Table 3.3-9**.

As outlined by the SJVAPCD, an exceedance of the daily thresholds does not necessarily result in a significant impact; however, such an exceedance triggers the need for an ambient air quality impact assessment. If the sum of the modeled pollutant concentration and the corresponding background concentration of each pollutant exceeds the CAAQS and/or NAAQS at the property boundaries, the Project could violate air quality standards and contribute substantially to an existing or projected air quality violation. **Table 3.3-10** shows the maximum concentration of each pollutant modeled at a property boundary receptor from the Project's construction activities in addition to the existing background concentration. As shown in **Table 3.3-10**, construction activities will not cause criteria pollutant concentrations of ROG, NO_X, SO_X, or CO at the Project's property line to exceed CAAQS or NAAQS. However, because the background concentration in the area for PM_{10} and $PM_{2.5}$ currently exceeds CAAQS and NAAQS, Project-related PM_{10} and $PM_{2.5}$ emissions from construction activities have the potential to contribute to the existing PM_{10} and $PM_{2.5}$ air quality violation and, per District Rule 2201, should be compared to the District recommended Significant Impact Level for each pollutant. As shown in **Table 3.3-10**, the maximum modeled concentrations of PM_{10} and $PM_{2.5}$ will not exceed the Significant Impact Level; therefore, Project construction will not contribute to a violation of an ambient air quality standard. This is considered a ***Less than Significant Impact***.

Table 3.3-7. Construction Emissions – Unmitigated[30]

Emission Type	Source	Unmitigated Emissions (tons per phase)[2]					
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
2021							
Exhaust	Off-Road Construction Equipment	0.2	2.2	<0.1	2.1	0.1	0.1
	On-Road Vehicles	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	1.5	0.2
	On-Road Vehicles (resuspended)	–	–	–	–	0.5	0.1
Total		**0.3**	**2.2**	**<0.1**	**2.2**	**2.1**	**0.4**
SJVAPCD Threshold		10	10	27	100	15	15
Exceed Threshold?		No	No	No	No	No	No
2022							
Exhaust	Off-Road Construction Equipment	1.3	11.8	<0.1	11.8	0.6	0.5
	On-Road Vehicles	0.4	0.3	<0.1	1.7	0.4	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	3.2	0.3
	On-Road Vehicles (resuspended)	–	–	–	–	4.5	1.0
Total		**1.7**	**12.1**	**<0.1**	**13.5**	**8.6**	**2.0**
SJVAPCD Threshold		10	10	27	100	15	15
Exceed Threshold?		No	**Yes**	No	No	No	No
2023							
Exhaust	Off-Road Construction Equipment	1.1	9.4	<0.1	9.4	0.5	0.4
	On-Road Vehicles	0.4	0.2	<0.1	1.5	0.3	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	2.3	0.2
	On-Road Vehicles (resuspended)	–	–	–	–	4.0	0.9
Total		**1.5**	**9.6**	**<0.1**	**10.9**	**7.1**	**1.7**

[30] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*". Table 7. Page 31. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

Table 3.3-7. Construction Emissions – Unmitigated[30]

Emission Type	Source	Unmitigated Emissions (tons per phase)[2]					
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
SJVAPCD Threshold		10	10	27	100	15	15
Exceed Threshold?		No	No	No	No	No	No

Rounded values shown; columns may not add up correctly. Subtotal equals the sum of all exhaust and fugitive dust emissions from off-road construction equipment and on-road vehicles. See Appendix AQGHG of Appendix "C" of this DEIR for calculations. N/A = not applicable (e.g., no threshold)

[1] Fugitive dust describes particulate matter that is emitted into the air due to earth moving activities or that has been re-suspended.

[2] Emissions by construction year are based on an estimated construction schedule and construction starting on October 1, 2021.

Table 3.3-8. Construction Emissions – Mitigated (Compliance with SJVAPCD Rule 9510)[31]

Emission Type	Source	Mitigated Emissions (tons per phase)[2]						With Water Control[3]	
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	PM_{10} (tons)	$PM_{2.5}$ (tons)
2021									
Exhaust	Off-Road Construction Equipment	0.2	1.8	<0.1	2.1	0.1	0.1	0.1	0.1
	On-Road Vehicles	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	1.5	0.2	0.6	0.1
	On-Road Vehicles (resuspended)	–	–	–	–	0.5	0.1	0.4	0.1
Total		**0.3**	**1.8**	**<0.1**	**2.2**	**2.1**	**0.4**	**1.1**	**0.3**
SJVAPCD Threshold		10	10	27	100	15	15	15	15
Exceed Threshold?		No	No	No	No	No	No	No	No
2022									
Exhaust	Off-Road Construction Equipment	1.3	9.4	<0.1	11.8	0.3	0.5	0.3	0.5
	On-Road Vehicles	0.4	0.3	<0.1	1.7	0.4	0.1	0.4	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	3.2	0.3	1.4	0.1
	On-Road Vehicles (resuspended)	–	–	–	–	4.5	1.0	4.0	0.9
Total		**1.7**	**9.7**	**<0.1**	**13.5**	**8.3**	**2.0**	**6.1**	**1.7**
SJVAPCD Threshold		10	10	27	100	15	15	15	15
Exceed Threshold?		No	No	No	No	No	No	No	No
2023									
Exhaust	Off-Road Construction Equipment	1.1	7.5	<0.1	9.4	0.3	0.4	0.3	0.4
	On-Road Vehicles	0.4	0.2	<0.1	1.5	0.3	0.1	0.3	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	2.3	0.2	1.0	0.1
	On-Road Vehicles (resuspended)	–	–	–	–	4.0	0.9	3.6	0.8

[31] Ibid. Table 8. Page 32.

Table 3.3-8. Construction Emissions – Mitigated (Compliance with SJVAPCD Rule 9510)[31]

Emission Type	Source	Mitigated Emissions (tons per phase)[2]						With Water Control[3]	
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	PM_{10} (tons)	$PM_{2.5}$ (tons)
Total		**1.5**	**7.7**	**<0.1**	**10.9**	**6.9**	**1.7**	**5.2**	**1.5**
SJVAPCD Threshold		10	10	27	100	15	15	15	15
Exceed Threshold?		No	No	No	No	No	No	No	No

Rounded values shown; columns may not add up correctly. Subtotal equals the sum of all exhaust and fugitive dust emissions from off-road construction equipment and on-road vehicles. See Appendix AQGHG of Appendix "C" of this DEIR for calculations. N/A = not applicable (e.g., no threshold)

[1] Fugitive dust describes particulate matter that is emitted into the air due to earth moving activities or that has been re-suspended.

[2] Emissions by construction year are based on an estimated construction schedule and construction starting on October 1, 2021.

[3.] Emissions estimates include implementation of watering twice per day to comply with dust control measures specified in Rule 8021 of Regulation VIII.

Table 3.3-9. Maximum Daily Construction Emissions[32]

	Emissions (lbs/day)					
	ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	16.7	114.7	0.5	128	112.8	22.7
Threshold	100	100	100	100	100	100
Threshold Exceeded?	No	**Yes**	No	**Yes**	**Yes**	No

lbs/day = pounds per day

[32] Ibid. Table 9. Page 33.

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Table 3.3-10. Construction Ambient Air Quality Assessment[33]

	Emissions					
	ROG (ppm)	NO_X (ppm)	SO_X (ppm)	CO (ppm)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)
Background Emissions[1]	0.04	0.02	<0.01	0.31	56.9	26.3
Maximum Modeled Concentration[2]	<0.01	<0.01	<0.01	<0.01	0.04	<0.01
Emissions Sum	0.04	0.02	<0.01	0.31	57.0	26.3
CAAQS[3]	0.09	0.180	0.25	9.0	20	12
Standard Exceeded?	No	No	No	No	**Yes**	**Yes**
NAAQS[3]	–	0.100	0.075	9.0	–	12
Standard Exceeded?	N/A	No	No	No	N/A	**Yes**
Maximum Modeled Concentration[2]	N/A	N/A	N/A	N/A	0.04	<0.01
Significant Impact Level	N/A	N/A	N/A	N/A	5	1.2
Significant Impact Level Exceeded?	N/A	N/A	N/A	N/A	**No**	**No**

N/A = not applicable

[1] Average background concentrations for each pollutant were obtained from CARB's Air Quality and Meteorological Information (AQMIS) system for Tulare County using daily data for 2018. In the absence of data from Tulare County, Kern County data or regional data from San Joaquin Valley Basin were used.

[2] For ROG, NO_X, SO_X, and CO, this is the maximum 1-hour modeled concentration at the property line. For PM_{10} and $PM_{2.5}$, this is the maximum period average modeled concentration at the property line. The averaging periods (i.e., maximum 1-hour average versus maximum period average) was selected to correspond with the available ambient air quality standards as recommended by SJVAPCD District Rule 2201 AAQA Modeling.

[3] The 1-hour standard CAAQS and NAAQS were used for ROG, NO_X, SO_X, and CO. In the absence of a 1-hour standard, such as for PM_{10} and $PM_{2.5}$, the annual average standard was used.

Operations. Table 3.3-11 summarizes estimated emissions associated with operation of the Project. As shown in **Table 3.3-11**, operational emissions from the Project will not exceed SJVAPCD recommended daily or annual thresholds for any criteria pollutant. This is considered a ***Less than Significant Impact***. Because Project operation will not generate emissions exceeding SJVAPCD's recommended 100 pounds per day screening threshold for any criteria pollutant, an AAQA is not required for operation activities.

Table 3.3-11. Estimated Operational Emissions[34]

Emission Type	Source	Emissions					
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
Exhaust	On Road and On-Site Vehicles	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fugitive Dust	Maintenance Vehicles	–	–	–	–	1.7	0.2
Total (tons/year)		**<0.1**	**<0.1**	**<0.1**	**<0.1**	**1.7**	**0.2**
SJVAPCD Threshold		10	10	27	100	15	15

[33] Ibid. Table 10. Page 34.

[34] Ibid. Table 12. Page 37.

Table 3.3-11. Estimated Operational Emissions[34]

Emission Type	Source	Emissions					
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
Exceed Threshold?		No	No	No	No	No	No
Total Daily Operations[1] (lbs/day)		**0.1**	**0.3**	**<0.1**	**0.2**	**14.2**	**1.4**
SJVAPCD Operational Threshold		100	100	100	100	100	100
Exceed Threshold?		**No**	**No**	**No**	**No**	**No**	**No**

Totals may not add up due to rounding. Subtotal equals the sum of all exhaust and fugitive dust emissions from on-road and on-site vehicles. See Appendix AQGHG of Appendix "C" of this DEIR for calculations. N/A = not applicable (e.g., no threshold)
[1]Annualized at 244 working days per year

Decommissioning. At the end of the Project's useful life (anticipated to be 30 to 40 years), the solar facility will be repowered or decommissioned. The PV arrays and supporting equipment largely sit on the surface of the land, and removal of the arrays will cause minimal alteration from its natural state, nor will extensive ground-disturbing activities be required. Any other activities required for deconstruction of the on-site facilities will require similar types and levels of equipment as those used during the construction phase. The Project will be required to comply with SJVAPCD Rule 8021, which requires implementation of dust control measures, and SJVAPCD Rule 9510 (Indirect Source Review), which requires reduction of engine exhaust emissions of NO_X and PM_{10}. Decommissioning activities at the Project site will not result in exceedances of SJVAPCD recommended thresholds or contribute to a violation of an ambient air quality standard. This is considered a ***Less than Significant Impact***.

Conclusion. The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable Air Quality Plan. The Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants would "Not conflict or obstruct implementation of the District's air quality plan."

As described above, construction, operation and maintenance, and decommissioning of the proposed Project will likely result in emissions of criteria pollutants including ozone precursors, such as ROG and NO_X as well as particulate matter. The SJVAPCD has prepared several air quality attainment plans to achieve ozone and particulate matter standards, including the following:

- *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan*
- *2013 Plan for the Revoked 1-Hour Ozone Standard*
- *2007 PM_{10} Maintenance Plan and Request for Re-designation*
- *2012 $PM_{2.5}$ Plan, and*
- *2015 Plan for the 1997 $PM_{2.5}$ Standard.*

As discussed above, compliance with SJVAPCD Rule 9510 will reduce annual construction emissions below SJVAPCD's NO_X threshold. No other criteria pollutant threshold will be exceeded during construction with or without adherence to SJVAPCD Rule 9510. As shown in **Table 3.3-10**, the maximum modeled concentrations of PM_{10} and $PM_{2.5}$ will not exceed the Significant Impact Level; therefore, Project construction will not contribute to a violation of an ambient air quality standard. Furthermore, operations and decommissioning of the proposed Project will not result in

exceedances of SJVAPCD recommended thresholds. Based on these considerations, the proposed Project will not contribute to a violation of an ambient air quality standard and will not conflict with implementation of existing air quality plans. The proposed Project will result in a ***Less than Significant Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin (Air Basin).

As discussed above, compliance with SJVAPCD Rule 9510 will reduce the proposed Project's annual construction emissions below SJVAPCD's NO_X threshold. No other criteria pollutant threshold will be exceeded during construction with or without adherence to SJVAPCD Rule 9510. Project construction will not contribute to a violation of an ambient air quality standard. Furthermore, operations and decommissioning of the proposed Project will not result in exceedances of SJVAPCD recommended thresholds. Based on these considerations, the proposed Project will not contribute to a violation of an ambient air quality standard and will not conflict with implementation of existing air quality plans.

Other cumulative projects within the San Joaquin Valley Air Basin will also be required to comply with SJVAPCD rules and requirements, and implement feasible measures to minimize air quality emissions. The proposed Project's contribution to a cumulative impact related to conflict with an existing air quality plan is considered ***Less than Significant Impact.***

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

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?

Project Impact Analysis: ***Less than Significant Impact***

See Item a), above, and Cumulative Impact Analysis, below.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin (Air Basin). This cumulative analysis is based on the information provided in the "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study"* prepared for the proposed Project.

The Air Basin currently is classified as non-attainment for the one-hour state ozone standard as well as for the federal and state eight-hour ozone standards. Additionally, the Air Basin is classified as non-attainment for the state 24-hour and annual arithmetic mean PM_{10} standards and the state annual arithmetic mean and national 24-hour $PM_{2.5}$ standards. Therefore, there is an existing adverse cumulative effect in the Air Basin relative to these pollutants.

The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself will be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. While the Project will likely contribute to an increase in NO_X, $PM_{2.5}$, and

PM_{10}, with implementation of dust control and exhaust emission reduction measures required by SJVAPCD Rule 8021 and 9510, the Project's incremental contribution to the cumulative effect will not be considered cumulatively considerable. Additionally, as discussed above, the proposed Project will not conflict with or obstruct implementation of the SJVAPCD's air quality plans. Therefore, Project construction and decommissioning, and operations and maintenance, will not result in a cumulatively considerable increase in emissions of nonattainment pollutants. A ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

c) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less than Significant Impact***

Carbon Monoxide. Exposure to high concentrations of CO can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. The Air Basin is currently an attainment area for CO; however, there is a potential for the formation of microscale CO "hotspots" to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and/or is operating on roadways crowded with non-Project traffic.

Construction traffic will primarily access the Project site from local roads (e.g., Avenue 56 and Road 236) During peak Project construction there could be an estimated 2,110 Project-related daily trips on SR 65, which will likely increase the daily traffic volume on SR 65 from 4,632 to 6,742 vehicles per day. Other local roads (Road 236 and Avenue 56) used during construction will experience a lower daily traffic volume of 1,975 to 2,109 vehicles per day. Even at the high end of the daily traffic volume (i.e., 6,742), vehicle trips will not result in a CO hotspot due to the small magnitude of emission sources and the low emission rates that occur due to catalytic converters. Additionally, the Project site is located in a rural flat area where air dispersion is not impeded by buildings or nearby terrain; therefore, CO emissions generated will disperse rapidly and construction traffic will not generate CO hotpots. This is considered a ***Less than Significant Impact***.

The proposed Project will likely have a total of 20 full-time employees once operational. This number of employees will generate a negligible increase in traffic. No CO hotspots will be created during Project operation and ***No Impact*** will occur.

Diesel Particulate Matter (DPM). Construction of the proposed Project will require use of heavy-duty construction equipment and diesel trucks which will emit DPM. **Figure 3.3-2** shows the receptor grids used to model health risk, the receptor grid point of maximum impact (PMI) off-site, and the maximum exposed individual resident (MEIR).

The worst-case scenario where construction at all parcels and gen-tie corridor will occur simultaneously was assessed to provide the most conservative health risk assessment. The highest off-site modeled average DPM concentration and PMI within the receptor grids will occur along the property boundary of the westernmost parcel in the Project Area, approximately 1,000 feet north of Avenue 56. The Project MEIR was determined to be adjacent to the eastern edge of

the Project Area boundary, at a rural residence across Road 240. Refer to **Figure 3.3-2** for the location of the PMI and MEIR in reference to the Project Area. The carcinogenic and chronic health risks at the PMI and MEIR are contained in **Table 3.3-12**. As shown in **Table 3.3-12**, excess cancer risk and chronic risk associated with Project construction and decommissioning will not exceed the risk criteria (2.00E-05) at the receptor grid MEIR even if construction occurred at all parcels simultaneously. This is considered a ***Less than Significant Impact***.

Because limited construction equipment will be in use during operational activities and the estimated PM_{10} emissions (i.e., DPM equivalent) related to exhaust emissions (**Table 3.3-11**) are minimal, Project operation will not result in adverse health impacts. This is considered a ***Less than Significant Impact***.

Figure 3.3-2. Maximum Exposed Individual Resident and Point of Maximum Impact

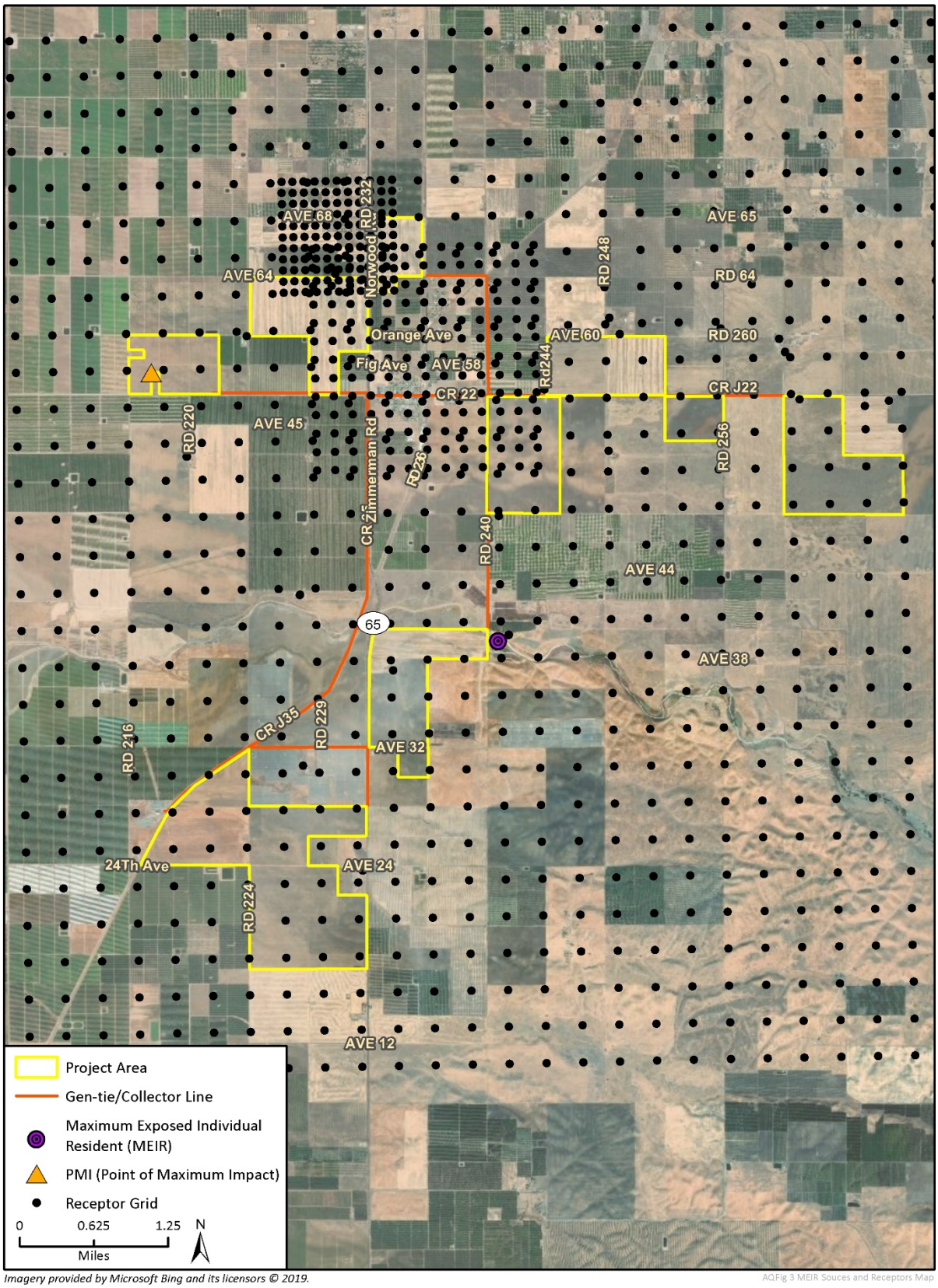

Table 3.3-12. Health Risk Associated with DPM Emissions during Construction and Decommissioning[35]

	Carcinogenic Risk by Age Group					Summed Lifetime		
	3rd Trimester	0-2 Years	2-16 Years	16-30 Years	16-70 Years	30 Years	70 Years	Chronic Risk Hazard Quotient
Construction Emissions (27 months)								
PMI[1]	4.54E-08	1.10E-06	2.14E-07	3.26E-08	2.82E-08	1.39E-06	1.38E-06	7.85E-04
MEIR	7.55E-09	1.82E-07	3.56E-08	5.41E-09	4.69E-09	2.31E-07	2.30E-07	1.30E-04
Risk Criteria	**2.00E-05**					**2.00E-05**		**1.0**
Exceed Criteria?	No	No	No	No	No	No	No	No
Construction and Deconstruction Emissions (54 months in a 70-year lifetime)								
PMI[1]	4.54E-08	1.10E-06	4.29E-07	6.51E-08	5.64E-08	1.64E-06	1.63E-06	7.85E-04
MEIR	7.55E-09	1.82E-07	7.12E-08	1.08E-08	9.37E-09	2.72E-07	2.70E-07	1.30E-04
Risk Criteria	**2.00E-05**					**2.00E-05**		**1.0**
Exceed Criteria?	No	No	No	No	No	No	No	No

[1] PMI represents the maximum risk of exposure off-site associated with the Project, but does not reflect risk at a sensitive receptor location.

Valley Fever. Construction activities that include ground disturbance can result in fugitive dust, which can cause fungus *Coccidioides* spores to become airborne if they are present in the soil. These spores can cause Valley Fever. Workers who disturb soil where fungal spores are found, whether by digging, operating earthmoving equipment, driving vehicles, or by working in dusty, wind-blown areas, are more likely to breathe in spores and become infected. It is not a contagious disease and secondary infections are rare. Construction activities associated with the Project will include ground-disturbing activities that could result in an increased potential for exposure of nearby residents and on-site workers to airborne spores, if they are present. Compliance with dust control measured required by SJVAPCD Rule 8021 (as detailed in **Table 3.3-6**) will minimize personnel and public exposure to Valley Fever and reduce the potential risk of nearby resident and on-site worker exposure to Valley Fever. This is considered a ***Less than Significant Impact***.

Naturally Occurring Asbestos. "Naturally occurring asbestos can be found in serpentine rock, and its parent material, ultramafic rock. The rock types are abundant in the Sierra foothills and have been identified in Tulare County. As shown in Figure 7-2 of the Porterville Area Community Plan, the Project site is not located in an area with ultramafic rocks, which are more likely to contain

[35] Ibid. Table 10. Page 32.

naturally occurring asbestos. Therefore, Project construction would have a low likelihood of disturbing naturally occurring asbestos."[36] This is considered a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project is not expected to expose sensitive receptors to substantial pollutant concentrations, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Project Impact Analysis: ***Less than Significant Impact***

While offensive odors do not cause any physical harm, they can be unpleasant, leading to distress among the general public and generates citizen complaints to local government agencies (such as the Sheriff, Fire or Environmental Health Departments) and the local air district. Any project with the potential to expose members of the public to objectionable odors has the potential to adversely impact the atmosphere (environment). Because of the subjective nature of odor impacts, the number of variables that may influence the potential for an odor impact, and the variety of odor sources; there are no quantitative or formulaic methodologies to determine if potential odors will have a significant impact. Projects should be evaluated on a case-by-case basis to determine if there are anticipated impacts to the environment associated with objectionable odors.

It anticipated the proposed Project's construction-related activities will result in diesel emissions exhaust from construction equipment and activities entering and exiting the construction site which may release odors into the atmosphere. However, construction-related emissions will be temporary and short-term and are not anticipated to affect a substantial number of local property owners as the Project is located in a rural area of Tulare County. Furthermore, the more extensive construction activities will occur within the proposed Project site thus reducing the potential for odors to affect property owners adjacent. Operation of the Project (solar energy facility) will not emit any odorous compounds. This is considered a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin.

The proposed Project is located in a remote location in rural areas in Tulare County. As previously discussed above, construction of the proposed Project could potentially generate odors associated with diesel combustion emissions; however, construction-related odors are anticipated to be temporary and short-term. The proposed Project's permanent operation is not anticipated to result

[36] Ibid. Page 31.

in the release of odors into the atmosphere. As the proposed Project will result in a Less than Significant Project-specific impact, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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3.4 Biological Resources

3.4.1 Summary of Findings

The proposed Project will result in ***Less Than Significant Impacts with Mitigation*** to Biological Resources. The "*Rexford Solar Farm Project Biological Resources Assessment*" was prepared by Rincon Consultants, Inc. (Rincon) and is included in Appendix "D" of this Draft EIR (or DEIR). The impact analyses and determinations in this chapter are based upon information obtained from the Biological Resources Assessment Report. A detailed review of potential impacts is provided in the following analysis

3.4.2 Introduction

CEQA Requirements

Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."[1]

The California Environmental Quality Act (CEQA; California Public Resources Code §§ 21000-21177) requires that State agencies, local governments, and special districts evaluate and disclose impacts from "projects" in the State. CEQA Guidelines Section 15380 clearly indicates that species of special concern (SSC) should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity.[2]

CEQA Guidelines Sections 15063 and 15065 address how an impact is identified as significant. These sections are particularly relevant to SSC. Project-level impacts on listed rare, threatened, or endangered species are generally considered significant, and therefore require lead agencies to prepare an Environmental Impact Report to fully analyze and evaluate the impacts. In determining to assign "impact significance" to populations of non-listed species, factors which are usually considered include population-level effects, proportion of the species' range affected by a project, regional effects, and impacts to habitat features.[3]

This section of the Draft EIR for the proposed Project meets CEQA requirements by addressing potential impacts on biological resources on the proposed Project site, which is located in a portion of the San Joaquin Valley in Tulare County. The Environmental Setting section provides a description of biological resources in the region, with special emphasis on the proposed Project site and vicinity. The Regulatory Setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

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[1] CEQA Guidelines Section 15382.

[2] California Department of Fish and Wildlife. Wildlife: Nongame: Species of Special Concern. *"How are SSCs addressed under the California Environmental Quality Act"* Accessed July 2019 at: http://www.dfg.ca.gov/wildlife/nongame/ssc/.

[3] Ibid.

Thresholds of Significance

The geographical area may be either statewide or nationwide, depending on the sensitive status of the species. Standards for listing as federal endangered species are determined by the Federal Endangered Species Act, administered by U.S. Department of Fish and Wildlife. Standards for listing of California special status species (Endangered, Threatened, Candidate Endangered, Candidate Threatened, and Sensitive Species) are administered by the California Department of Fish and Wildlife (DFW). These requirements are described in further detail in the "Regulatory" section of this document.

3.4.3 Environmental Setting

"The San Joaquin Valley (Valley) comprises the southern two-thirds of the Central Valley of California. It is situated between the Sierra Nevada Mountains to the east, the Diablo and Temblor Ranges (Coast Ranges) to the west, and the Tehachapi Mountains to the south. The Project Area is located in the Tulare Basin in the southeastern portion of the Valley, in an area that consists predominantly of flood plains, alluvial fans, fan terraces, dunes, and low and high terraces. Elevations within the Project Area range from 475-670 feet (145-190 meters) above mean sea level. The region immediately surrounding the Project Area consists of current and past agricultural activities and human-related disturbances, such as dirt roads and scattered residential development."[4]

"Vegetation types in the San Joaquin Valley have been significantly modified and disturbed by anthropogenic activity. The region once consisted of a diverse assemblage of perennial bunchgrass ecosystems that included a variety of vegetation communities and mosaic of habitats including prairies, oak-grass savannas, desert grasslands, riparian woodlands, freshwater marshes, alkali sink, and vernal pools. Extensive agricultural and urban/suburban development during the 19th and 20th centuries has resulted in substantial modification to virtually all of the Central Valley's habitats. Grasslands in the region are now dominated by introduced non-native grasses and most wetlands and lakes have been drained to support the extensive irrigation infrastructure of the Valley. In general, agricultural development, urban expansion and changes to the hydrologic regimes have resulted in a loss of the majority of natural habitats and native vegetation communities."[5]

The Project site and the surrounding vicinity consists predominantly of disturbed agricultural lands. Due to the disturbed nature of the site, wildlife diversity is expected to be low, and field surveys confirmed relatively low species diversity and abundance in the Project site.

3.4.4 Existing Conditions

Vegetation Communities/Land Cover

Two natural vegetation communities and six land cover types were documented within the Project site: 1) Fallow agricultural field; 2) Agricultural fields (grain/ruderal); 3) Developed; 4) Intermittent stream; 5) Ephemeral drainage; 6) Basin; 7) Isolated seasonal wetland; and 8) Irrigation ditch. These vegetation communities and land cover types are depicted on **Figure 3.4-1** through **Figure 3.4-4**.

[4] "*Rexford Solar Farm Project Biological Resources Assessment*." Page 10. Prepared by Rincon Consultants, Inc. and included in Appendix "D" of this DEIR.

[5] Ibid. Page 14.

The majority of the Project site (93 percent) is comprised of active agricultural fields (containing crops or recently disked lands), fallow agricultural fields (fields in state of reversion back to non-native grassland), and developed areas (roads, agricultural infrastructure, and rural, single-family houses). Fallow agricultural fields are located in the southwest of the Project site. Areas mapped as Developed in the Project Area include roads along gen-tie/collector line corridors, rural residential buildings and barns, and agricultural storage structures. The intermittent stream, ephemeral drainage, isolated seasonal wetland, and irrigation ditch are described below under "Jurisdictional Waters."

Descriptions of the natural vegetation communities and the other land cover types are provided in the *Rexford Solar Farm Project Biological Resources Assessment* (Appendix "D" of this EIR).

Special-Status Plant Species

Of the 20 species evaluated for their potential to occur on the Project site, only one (1) has potential to occur on site based on the presence of potentially suitable habitat: San Joaquin adobe sunburst (*Pseudobahia peirsonii*). The remaining 19 species were excluded based on the absence of habitat, lack of suitable soils, and historical disturbance experienced in the Project site (see Appendix "D" for a species by species evaluation).

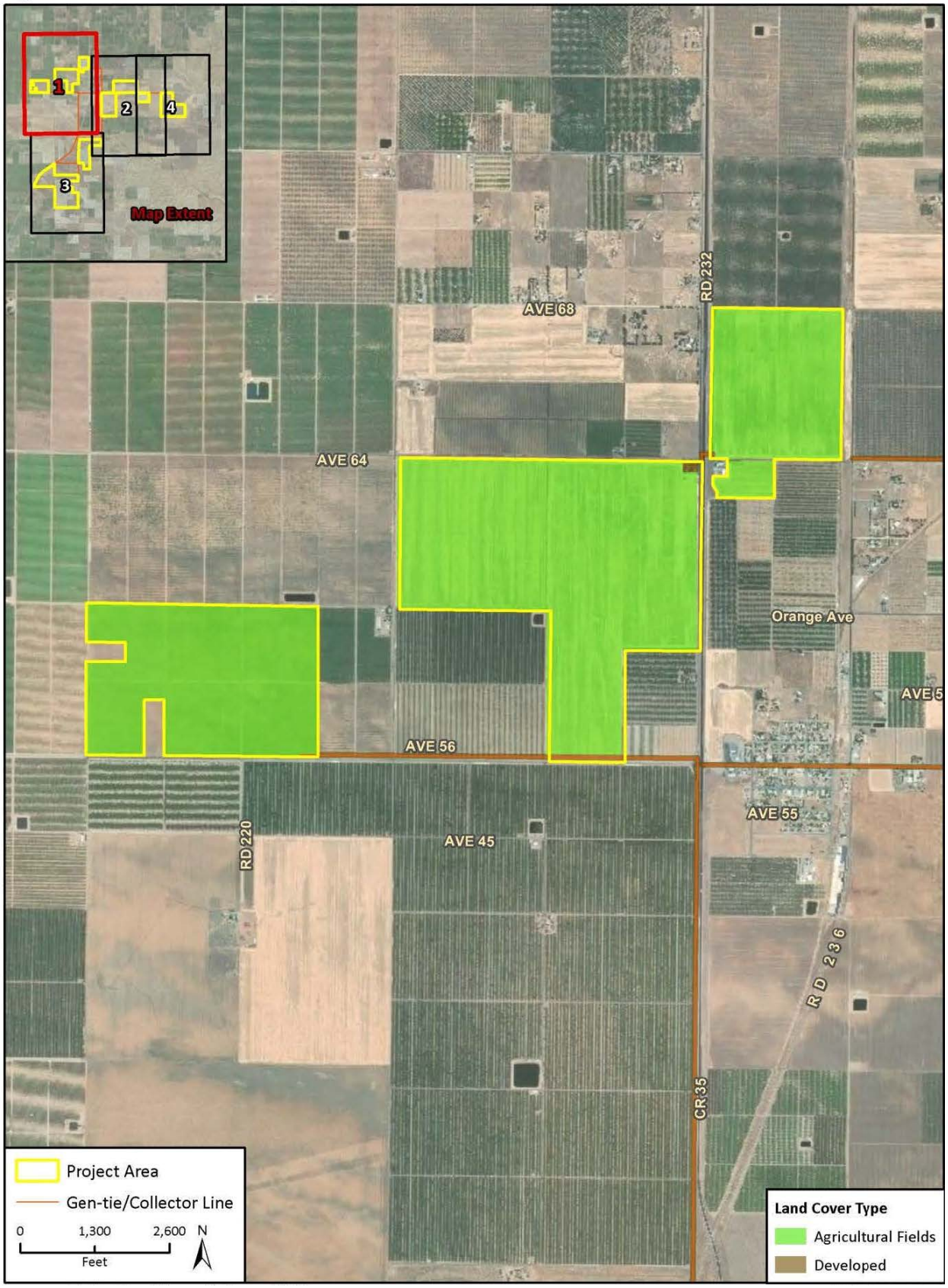
San Joaquin Adobe Sunburst. "The San Joaquin adobe sunburst is a federally threatened and state endangered species that occurs in valley or foothill grasslands or cismontane woodlands in the southeastern San Joaquin valley.

There are two historic occurrences within the Project site, including one (1) at the southwestern edge of the Project Area, in the southernmost parcel along Richgrove Road. While sites with active agriculture are unlikely to have this plant present, recent occurrences in the California Natural Diversity Database (CNDDB) have found it co-occurring with non-native oats (*Avena* sp.) and other plants typical of grasslands in the area. Areas of the Project Area that are left fallow or peripheral areas (road edges, untilled edges of fields) with clay soils have a low potential to provide suitable habitat for this species.

No individuals were observed during the reconnaissance survey conducted by Rincon staff in October 2019."[6]

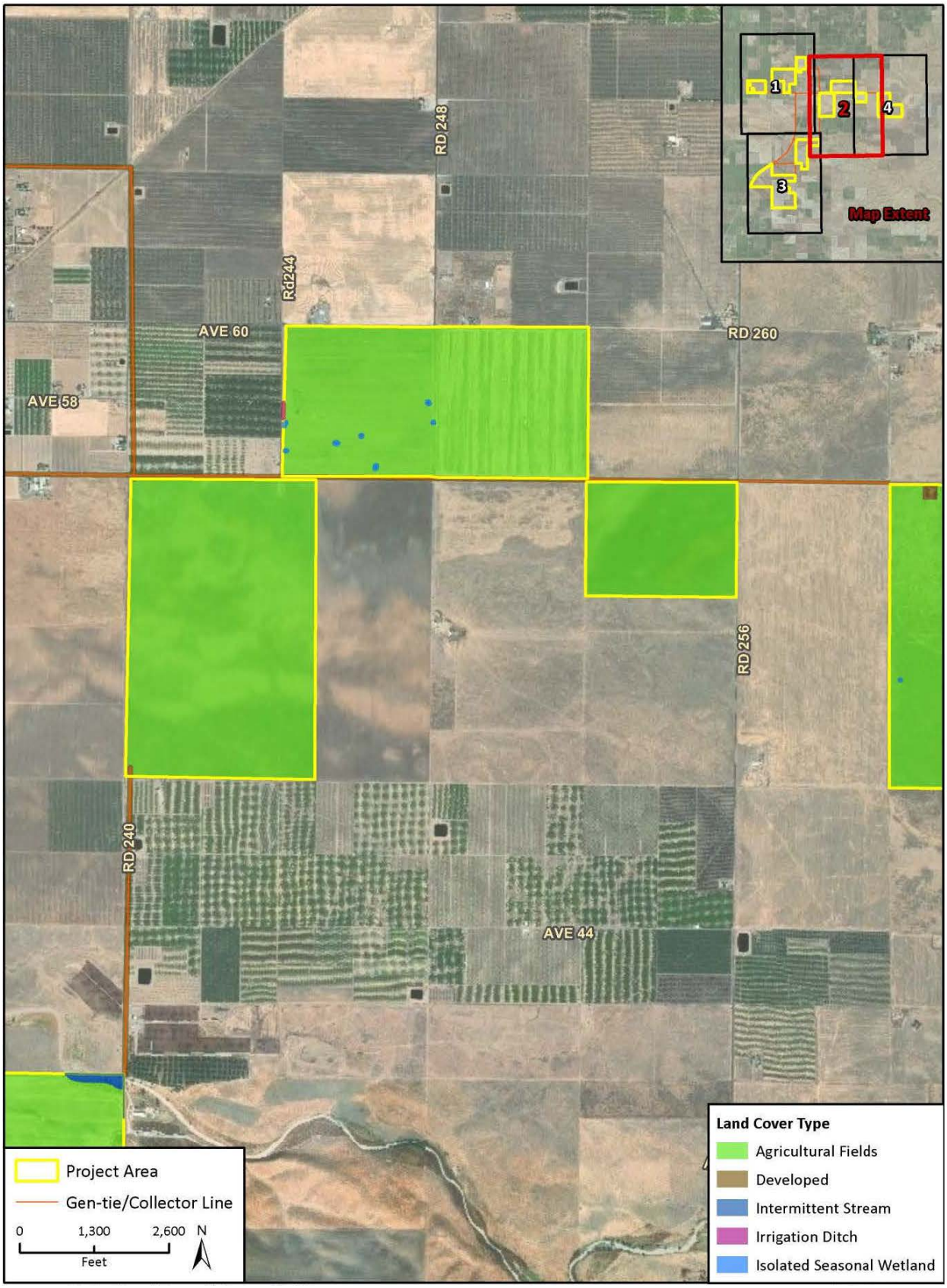
[6] Ibid. Pages 22-23.

Figure 3.4-1. Land Cover (Map 1 of 4)



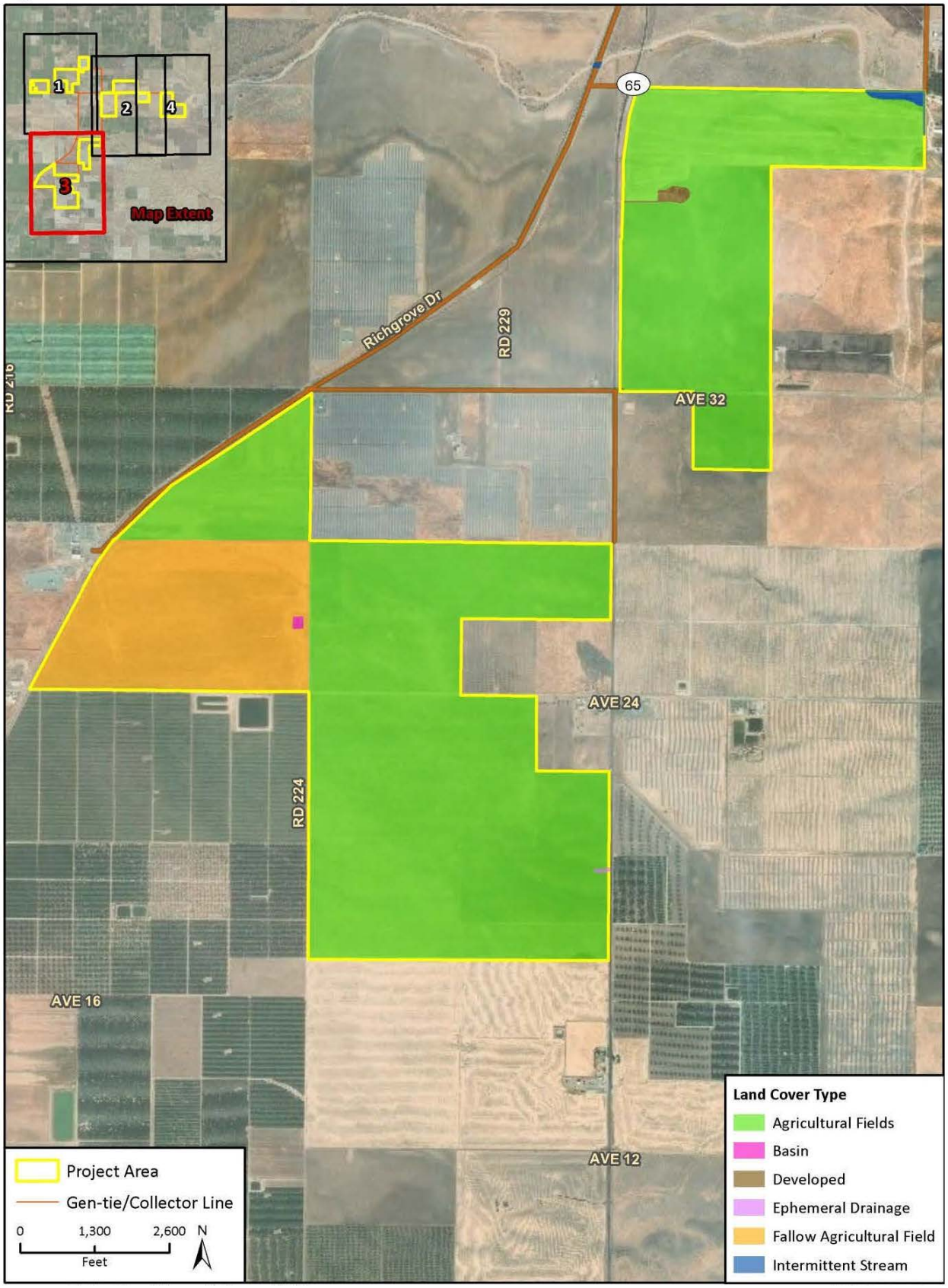
Source: Appendix "D" of this EIR

Figure 3.4-2. Land Cover (Map 2 of 4)



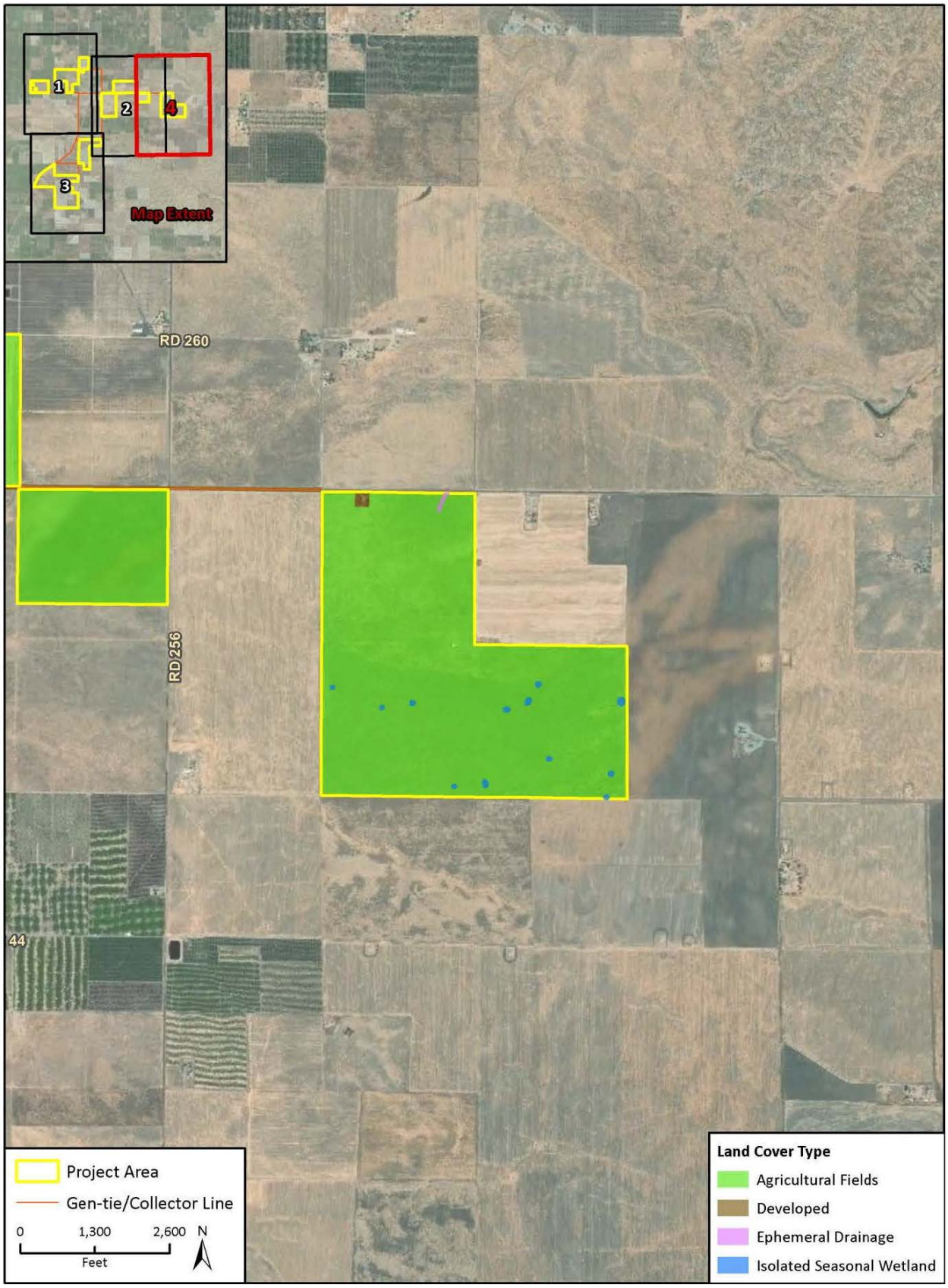
Source: Appendix "D" of this EIR

Figure 3.4-3. Land Cover (Map 3 of 4)



Source: Appendix "D" of this EIR

Figure 3.4-4. Land Cover (Map 4 of 4)



Source: Appendix "D" of this EIR

Special-Status Wildlife Species

Of the 24 special-status species evaluated for their potential to occur on the Project site, four species listed as threatened or endangered by state or federal regulations and two SSC have a potential to occur on the Project site and four other state-protected species were observed during surveys of the Project site.

San Joaquin Kit Fox. "The San Joaquin kit fox (SJKF) is a federally endangered and state threatened species that is endemic to California west of the Sierra Nevada Mountains. SJKF are most commonly found in gently sloping to relatively flat terrain vegetated with grasslands and open scrub. They may occur on a limited basis in areas under less intense agricultural production, such as dry-land grain farming and orchards, and they are known to occur in urban areas.

No sign of SJKF (track, feces, or dens) was observed in the Project Area during the reconnaissance surveys. All 19 reported occurrences within five miles of the site were documented in the 1970s, and the intensive agricultural development in the area has likely reduced kit fox activity in the area. The Project Area is unlikely to contain resident SJKF; however, there is a low potential the species could occur while foraging or during dispersal through the Project Area."[7]

Burrowing Owl. "Burrowing owl is a California Department of Fish and Wildlife (CDFW) SSC that occupies open, treeless areas within grassland, low density scrub, and desert biomes. Burrowing owl often uses relatively disturbed areas such as agricultural fields, golf courses, cemeteries, and vacant urban lots in addition to natural breeding habitats. Nests are most often in fossorial animal burrows, such as California ground squirrel or American badger, but atypical anthropological nests such as culverts or rubble piles may also be used.

There is one (1) known burrowing owl occurrence within five miles of the Project Area. Active agricultural fields do not provide suitable habitat for the species; however, open areas and berms along fence-lines and the margins of agricultural fields where ground squirrel burrows are present provide suitable, (although generally marginal) breeding habitat. No burrowing owls or their sign were observed during the reconnaissance surveys. However, there is a low potential for burrowing owl to forage or nest within suitable habitat in the Project Area and within 500 feet of the Project Area."[8]

Swainson's Hawk. Swainson's hawk is a state threatened species. "This species is often found nesting in trees associated with scattered rural residences, particularly in relation to grasslands or dry-land grain fields. Throughout its range, the species nest almost exclusively in trees, typically on the edges of woodland adjacent to grass or shrubland habitat.

The CNDDB does not contain any records of Swainson's hawks nesting within 10 miles of the Project Area, and no Swainson's hawks or raptor nests were observed during surveys. Very few trees are present within the Project Area or in the immediate vicinity. Suitable nesting habitat within one (1) mile of the Project Area is limited to isolated trees or tree rows outside of the Project Area on State Route (SR) 65 on the north and south ends of the Project Area, Road 256 on the east side of the Project Area, and along the White River east of the Project Area. There is a low potential for the species to nest outside of, but within one (1) mile of the Project Area."[9]

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[7] Ibid. Pages23-24.

[8] Ibid. Page 24.

[9] Ibid.

Other Raptors. "Cooper's hawk, northern harrier, white-tailed kite, and prairie falcon were detected in the Project Area during surveys. Cooper's hawk and prairie falcon are state watch list species. Northern harrier is a CDFW SSC, and white-tailed kite is a state fully protected species.

None of these species had recorded CNDDB occurrences within 10 miles of the Project Area. While suitable foraging habitat is present, it is unlikely that any of these species will nest within the Project Area. Vegetation on the ground is not dense enough for northern harrier nesting habitat. Cliffs and bluffs suitable for prairie falcon nests are not present in the Project Area. The sparse trees within the Project Area provide only marginally suitable nesting habitat for white-tailed kites and Cooper's hawks, as denser stands of trees are preferred. Cooper's hawks generally occur in wooded areas and the individual observed in the Project site was likely migrating or foraging farther from its preferred habitat."[10]

Western Spadefoot. "Western spadefoot is a CDFW SSC found in sandy washes and flood plains of the Central Valley and the central and southern Coast ranges of California. Breeding occurs in vernal pools or ponds with slow or stagnant water.

Two occurrences have been recorded within five miles of the Project Area. The Project Area contains suitable habitat in sandy soils and small mammal burrows. This species has a low potential to occur in burrows near water sources within the Project Area, such as the White River, or near irrigation ponds that occur adjacent to the Project Area.[11]

Vernal Pool Fairy Shrimp. "Vernal pool fairy shrimp is a federally threatened species. This species inhabits small, clear-water sandstone depression pools and grassed swales, earth slumps, or basalt-flow depression pools. Vernal pool fairy shrimp typically hatches when the first rains of the year fill the pools. They mature in about 41 days under typical winter conditions. Towards the end of the season, females produce cysts that become embedded in the dried mud bottom in the summer.

The literature review identified four occurrences of vernal pool fairy shrimp within five miles of the Project Area. Potentially suitable habitat for this species was identified within isolated seasonal wetlands in the parcel west of Road 244 and north of Avenue 56"[12] (**Figure 3.4-2**).

Jurisdictional Waters

White River. "The White River crosses a portion the Project Area at its center, immediately west of Road 240 and at a gen-tie/collector line corridor west of the same parcel, along Richgrove Road (**Figure 3.4-3**). Vegetation is sparse in the vicinity of the White River within the Project parcel. The riverbed itself is mostly sand with sparse vegetation along its banks. Vegetation along the banks and adjacent to the drainage include blue elderberry (*Sambucus nigra* ssp. *caerulea*), red willows (*Salix laevigata*.), and tree tobacco (*Nicotiana glauca*) along with a mix of ruderal grasses and forbs. At the gen-tie/collector line corridor crossing, vegetation consists mainly of ruderal grasses and forbs, although three elderberry shrubs are present."[13]

The White River is not considered a navigable water; therefore, it is not subject to USACE jurisdiction. It is considered waters of the state under Regional Water Quality Control Board (RWQCB) jurisdiction

[10] Ibid. Page 25.

[11] Ibid.

[12] Ibid.

[13] Ibid. Page 19.

under the Porter Cologne Water Quality Control Act. Because it shows evidence of a bed and bank, it may be subject to CDFW jurisdiction under California Fish and Game Code (CFGC).

Ephemeral Drainage. "Two ephemeral drainages occur within the Project Area. One conveys water from a roadside drainage ditch on Avenue 56 south into the eastern-most parcel (**Figure 3.4-4**). The other ephemeral drainage was observed east of a corrugated pipe culvert under State Route 65 at the southern end of the Project Area (**Figure 3.4-3**). This drainage is sparsely vegetated and located within an active agricultural field.[14]

The ephemeral drainage is not considered a navigable water, therefore it is not subject to USACE jurisdiction. It is considered waters of the state under RWQCB jurisdiction under the Porter Cologne Water Quality Control Act. Because it shows evidence of a bed and bank, it may be subject to CDFW jurisdiction under CFGC.

Isolated Seasonal Wetlands. Nineteen isolated seasonal wetlands are present within the Project Area, seven in the parcel north of Avenue 56 and east of Road 244 (**Figure 3.4-2**), and twelve in the eastern-most parcel south of Avenue 56 (**Figure 3.4-4**). The seven landscape depressions in the more western parcel are vegetated with facultative wetland and upland species, including rabbit's foot grass (*Polypogon monspeliensis*), knotweed (*Polygonum aviculare ssp. depressum*) and toadrush (*Juncus bufonius*). Surrounding the depressions were oats (*Avena* sp.), prickly lettuce (*Lactuca serriola*), horseweed (*Erigeron* sp.), and Russian thistle. The twelve wetland depressions in the eastern-most parcel were mostly devoid of vegetation, and little difference was observed between the vegetation in surrounding upland areas and that surrounding the wetlands, likely due to intensive cattle grazing in that parcel."[15]

While the isolated wetlands fit USACE wetland criteria, they are located outside of a 100-year floodplain and greater than 4,000 feet from any waters of the United States, therefore they are not subject to USACE jurisdiction. The wetlands are considered waters of the state under RWQCB jurisdiction under the Porter Cologne Water Quality Control Act.

Irrigation Ditch. An irrigation ditch located within the Ducor Irrigation District was observed in the same parcel as the isolated seasonal wetlands, immediately east of Road 244, north of Avenue 56 (**Figure 3.4-2**). This ditch connects to an isolated seasonal wetland. Vegetation in the ditch was mostly absent, with obvious soil cracking and moist soils indicating recent presence of water. Vegetation surrounding the ditch is similar to the vegetation surrounding isolated seasonal wetlands within the same parcel."[16]

The irrigation ditch is considered waters of the state under RWQCB jurisdiction under the Porter Cologne Water Quality Control Act.

Wildlife Corridors

"Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others

[14] Ibid.

[15] Ibid. Page 20.

[16] Ibid.

may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network. The California Essential Habitat Connectivity Project commissioned by the California Department of Transportation (Caltrans) and CDFW; identifies "Natural Landscape Blocks" which support native biodiversity and the "Essential Connectivity Areas" which link them.

Wildlife movement corridors can be both large and small in scale. Fallow agricultural fields, fence-lines, culverts, and dry riverbeds, such as the White River, provide local scale opportunities for wildlife movement throughout the Project Area. Existing roads within the Project Area also act as corridors for wildlife movement, particularly for relatively disturbance-tolerant species such as red fox, coyote, and raccoon.

Natural Landscape Blocks are mapped within the Project Area in a small section of the parcel west of Road 240, just south of the White River. No Essential Connectivity Areas are mapped within the Project Area."[17]

Habitat Conservation Plan

"The Project is not within any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan."[18]

3.4.5 Regulatory Setting

Federal

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (16 USC Section 153 et seq.) and thereby has jurisdiction over federally listed threatened, endangered, and proposed species. Projects that may result in a "take" of a listed species or critical habitat must consult with the USFWS. "Take" is broadly defined as harassment, harm, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collection; any attempt to engage in such conduct; or destruction of habitat that prevents an endangered species from recovering (16 USC 1532,50 CFR 17.3). Federal agencies that propose, fund, or must issue a permit for a project that may affect a listed species or critical habitat are required to consult with the USFWS under Section 7 of the Federal Endangered Species Act. If it is determined that a federally listed species or critical habitat may be adversely affected by the federal action, the USFWS will issue a "Biological Opinion" to the federal agency that describes minimization and avoidance measures that must be implemented as part of the federal action. Projects that do not have a federal nexus must apply for a take permit under Section 10 of the Act. Section 10 of the act requires that the project applicant prepare a habitat conservation plan as part of the permit application (16 USC 1539).

Under Section 4 of the Federal Endangered Species Act, a species can be removed, or delisted, from the list of threatened and endangered species. Delisting is a formal action made by the USFWS and is the result of a determined successful recovery of a species. This action requires posts in the federal registry and a public comment period before a final determination is made by the USFWS.

[17] Ibid. Page 27.

[18] Ibid.

Migratory Bird Treaty and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA, 16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668) protect certain species of birds from direct "take." The MBTA protects migrant bird species from take by setting hunting limits and seasons and protecting occupied nests and eggs. The Bald and Golden Eagle Protection Act (16 USC Sections 668-668d) prohibits the take or commerce of any part of Bald and Golden Eagles. The USFWS administers both acts, and reviews federal agency actions that may affect species protected by the acts.

Clean Water Act – Section 404

Wetlands and other waters of the U.S. are subject to the jurisdiction of the U.S. Army Corp of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) under Section 404 of the Clean Water Act (33 U.S.C. 1251 et seq., 1972). Together, the EPA and the USACE determine whether they have jurisdiction over the non-navigable tributaries that are not relatively permanent based on a fact-specific analysis to determine if there is a significant nexus. These non-navigable tributaries include wetlands adjacent to non-navigable tributaries that are not relatively permanent and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

Wet areas that are not regulated by this Act do not have a hydrologic link to other waters of the U.S., either through surface or subsurface flow and include ditches that drain uplands, swales or other erosional features. The USACE has the authority to issue a permit for any discharge, fill, or dredge of wetlands on a case-by-case basis, or by a general permit. General permits are handled through a Nationwide Permit (NWP) process. These permits allow specific activities that generally create minimal environmental effects. Projects that qualify under the NWP program must fulfill several general and specific conditions under each applicable NWP. If a proposed project cannot meet the conditions of each applicable NWP, an individual permit would likely be required from the USACE.

State

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) regulates the modification of the bed, bank, or channel of a waterway under Sections 1601-1607 of the California Fish and Game Code (CFGC). Also included are modifications that divert, obstruct, or change the natural flow of a waterway. Any party who proposes an activity that may modify a feature regulated by the Fish and Game Code must notify CDFW before initiation of project construction. CDFW will then decide whether to enter into a Streambed Alteration Agreement with the project applicant either under Section 1601 (for public entities) or Section 1603 (for private entities) of the Fish and Game Code.

California Endangered Species Act

CDFW administers the California Endangered Species Act of 1984 (Fish and Game Code Section 2080), which regulates the listing and "take" of endangered and threatened State-listed species. A "take" may be permitted by CDFW through implementing a management agreement. "Take" is defined by the California Endangered Species Act as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" a State-listed species (Fish and Game Code Sec. 86). Under State laws, CDFW is empowered to review projects for their potential impacts to State-listed species and their habitats.

CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species. California candidate species are afforded the same level of protection as State-listed species. California also designates Species of Special Concern that are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future.

All State lead agencies must consult with CDFW under the California Endangered Species Act when a proposed project may affect State-listed species. CDFW would determine if a project under review would jeopardize or result in taking of a State-listed species, or destroy or adversely modify its essential habitat, also known as a "jeopardy finding" (Fish and Wildlife Code Sec. 2090). For projects where CDFW has made a jeopardy finding, CDFW must specify reasonable and prudent alternatives to the proposed project to the State lead agency (Fish and Wildlife Code Sec. 2090 et seq.).

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act allows a process for developing natural community conservation plans (NCCPs) under CDFW direction. NCCPs allow for regional protection of wildlife diversity, while allowing compatible development. CDFW may permit takings of State-listed species whose conservation and management are provided in a NCCP, once a NCCP is prepared (Fish and Game Code Secs. 2800 et seq.).

California Wetlands Conservation Policy

The California Wetlands Conservation Policy's goal is to establish a policy framework and strategy that will ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California. Additionally, the policy aims to reduce procedural complexity in the administration of State and federal wetlands conservation programs and to encourage partnerships with a primary focus on landowner incentive programs and cooperative planning efforts. These objectives are achieved through three policy means: statewide policy initiatives, three geographically based regional strategies in which wetland programs can be implemented, and creation of interagency wetlands task force to direct and coordinate administration and implementation of the policy. Leading agencies include the Resources Agency and the California Environmental Protection Agency (Cal/EPA) in cooperation with Business, Transportation and Housing Agency, Department of Flood and Agriculture, Trade and Commerce Agency, Governor's Office of Planning and Research, CDFW, Department of Water Resources, and the State Water Resources Control Board.

Birds of Prey

Birds of Prey are protected under California Fish and Wildlife Code Section 3503.5, which states:

> "It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

This includes any construction-related activity disturbance which could lead to nest abandonment, which is considered a "taking" by the CDFW.

Special-Status Species

Several species of plants and animals within the state of California have low populations, limited distribution, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. State and federal laws have provided the CDFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as special status species.

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

ERM-1.1 Protection of Rare and Endangered Species. The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or federal government, through compatible land use development.

ERM-1.2 Development in Environmentally Sensitive Areas. The County shall limit or modify proposed development within areas that contain sensitive habitat for special-status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.7 Planting of Native Vegetation. The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

3.4.6 Impact Evaluation

Would the Project:

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 Game or U.S. Fish and Wildlife Service?

Project Impact Analysis: ***Less than Significant with Mitigation***

San Joaquin Adobe Sunburst. Although no individuals were observed on the Project site during the reconnaissance survey in October 2019, the San Joaquin adobe sunburst has a low potential to occur on the Project site. This species has the potential to occur in the southwest portion of the Project site containing fallow agricultural fields, and in the upland vegetation surrounding isolated seasonal wetlands in the parcel toward the northeast portion of the Project site. This plant is also

likely to occur along fence lines and road edges where vegetation is not plowed throughout the Project site.

If present, direct impacts to the San Joaquin adobe sunburst such as loss of plants or their habitat will occur due to Project activities such as grubbing and grading. Indirect impacts will include changes in soil profile, fugitive dust, and accidental human intrusion into sensitive areas. These impacts will result in a significant. With the implementation of **Mitigation Measure 3.4-1**, these impacts will be ***Less than Significant Impact with Mitigation***.

San Joaquin Kit Fox. Although no evidence of SJKF or burrows of sufficient size to accommodate kit foxes were detected during site surveys, SJKF has a low potential to occur on-site. Foxes may use dry-land agriculture, fallow agricultural fields, and adjacent grasslands for foraging; however, the low abundance of prey makes the site marginal as foraging habitat. SJKF may occur within the Project site irregularly during dispersal.

Direct impacts to SJKF, if present during construction-related activity, could include injury or mortality of individuals. Injury or mortality of even a single individual will be considered significant under CEQA. With the implementation of **Mitigation Measures 3.4-2** and **3.4-3**, these impacts will be ***Less than Significant Impact with Mitigation***.

Burrowing Owl. As previously discussed above, no burrowing owls or signs of burrowing owl use of small mammal burrows were detected during reconnaissance surveys of the Project site. Isolated and low-density California ground squirrel colonies in the Project site and associated ditches and roadside berms provide suitable, but currently unoccupied nesting habitat, predominantly at the margins of agricultural fields. Burrowing owls may utilize the Project site for foraging; however, ongoing agricultural uses and low abundance of prey make most of the Project site poor quality foraging habitat. The species is most likely to occur as a transient. The presence of small numbers of California ground squirrel burrows in isolated locations on and adjacent to the site present a low potential for burrowing owls to establish a nest on-site in the future. If this were to occur, the Project could directly impact the nest either through ground disturbance activities destroying the nest, or through disruption of normal biological behaviors during construction-related activity of the Project resulting in nest failure. These impacts will be considered significant. With the implementation of **Mitigation Measure 3.4-4**, these impacts will be ***Less than Significant Impact with Mitigation***.

Swainson's Hawk. A small number of suitable nesting trees for Swainson's hawk and other birds and raptors are present within the Project site in landscaped vegetation of developed areas (**Figure 3.4-1** and **Figure 3.4-2**), in the two willow trees present at the White River, and in other landscaped trees within 0.5 mile of the Project site. Construction-related activity initiated within 0.5-mile of an active Swainson's hawk nest could significantly disturb the species thereby resulting in nest abandonment. Swainson's hawks may also forage within the Project site; however, the existing Project site represents only marginal foraging habitat. Based on the large area of available Swainson's hawk foraging habitat in the region similar to the land cover types within the Project site, loss of foraging habitat from the development of the Project site will not be considered a significant impact. Impacts that result in incidental take of nesting Swainson's hawks within 0.5 mile of the Project will be considered significant. With the implementation of **Mitigation Measure 3.4-5**, these impacts will be ***Less than Significant Impact with Mitigation***.

Other Raptors. Cooper's hawk, northern harrier, white-tailed kite, and prairie falcon were observed in the Project site during surveys. If nests are present in the Project site during construction-related activity, the Project could directly impact the nest either though ground

disturbance activities destroying the nest, or through disruption of normal biological behaviors during construction-related activity of the Project resulting in nest failure. Direct impacts to non-listed species will not be significant under CEQA, but will be a violation of CFGC. With the Implementation of **Mitigation Measure 3.4-5**, these impacts will be ***Less than Significant Impact with Mitigation***, and will avoid violations of the CFGC.

Western Spadefoot. Impacts to western spadefoot may occur if individuals are present during construction-related activity. Indirect impacts may occur due to disturbance and loss of habitat, and direct impacts may occur as a result of mortality during clearing and grubbing or active construction. Impacts to non-listed species such as western spadefoot (an SSC) will be considered significant under CEQA if it will threaten the continued existence of the population. Due to the disturbance of habitat from agricultural-related activities in the area and the prevalence of dryland farming, the only parcels on which the spadefoot has a low potential to occur are those with non-native grasses in the vicinity of isolated seasonal wetlands and ground squirrel burrows, and in proximity of the White River. It is unlikely that the continued existence of the population will be threatened due to the small area of marginally suitable habitat within the Project site and the presence of similar habitat in surrounding areas outside of the Project that likely support larger populations of this species. Impacts to western spadefoot from Project activities are not expected, and will result in a ***Less than Significant Impact***.

Vernal Pool Fairy Shrimp. The White River, ephemeral drainage and isolated wetlands within the Project site provide approximately 0.27 acres of potentially suitable habitat for the federally threatened vernal pool fairy shrimp. The Project will be designed to avoid direct impacts to areas that provide suitable habitat for vernal pool fairy shrimp. Indirect impacts may occur through water quality degradation, localized erosion, or human intrusion. However, Project design features requiring the preparation and implementation of appropriate stormwater pollution prevention plan measures (e.g., silt fencing) and implementation of **Mitigation Measure 3.4-6** will ensure no indirect impacts will occur to vernal pool fairy shrimp.

Cumulative Impact Analysis: ***Less than Significant with Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts will extend beyond Tulare County jurisdictional boundaries.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measures 3.4-1 through 3.4-6**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will result in a ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s)

3.4-1 **San Joaquin Adobe Sunburst.** A pre-construction survey for San Joaquin Adobe Sunburst within fallow agricultural fields and vegetation surrounding isolated wetlands within the Project site will be conducted by a qualified botanist during its blooming period (February- April) following CDFW and USFWS special-status plant survey guidelines to determine if populations are present. If detected, San Joaquin adobe sunburst locations within the Project site will be flagged, and a 150-foot avoidance buffer established. If avoidance is not feasible, consultation with USFWS and CDFW

to determine compensatory mitigation measures would occur before construction-related activity could continue.

3.4-2 **San Joaquin Kit Fox.** A pre-construction clearance survey for San Joaquin kit fox shall be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas shall include the entire Project site and all undeveloped habitat within 200 feet. If no potential dens are located, construction-related activity may proceed. If a potential den is located, an infrared camera trap shall be placed at the den entrance for three days to confirm species occupancy. If San Joaquin kit fox use is observed, the den shall be avoided and the USFWS shall be contacted. Construction-related activities shall adhere to the avoidance and minimization measures outlined in the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011)*, outlined below:

3.4-2. a. Project-related vehicles shall observe a 20-mph speed limit in all Project areas, except on County roads and State and Federal highways; this is particularly important at night when kit fox are most active. To the extent possible, night-time construction-related activity shall be minimized. Off-road traffic outside of designated Project areas shall be prohibited.

3.4-2.b. To prevent inadvertent entrapment of kit fox or other animals during the construction-related activity phase of the Project, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials or provided with one (1) or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS shall be notified within three days of the discovery.

3.4-2.c. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction-related activity or Project site.

3.4-2.d. No firearms or pets shall be allowed on the Project site.

3.4-2.e. Use of rodenticides and herbicides in Project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit fox and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, California Department of Pesticide Regulation, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFW Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.

3.4-3 **Worker Environmental Awareness Program.** Prior to the issuance of grading or building permits, and for the duration of construction-related activities, all new construction workers at the Project site shall attend a Worker Environmental Awareness Program (WEAP), developed and presented by the Project Lead Biologist. The WEAP shall be presented by the Lead Biologist and shall include information on the life history of each federal and state-listed species, as well as other special-status wildlife, natural communities, and plant species that may be encountered during construction-related activities, their legal protections, the definition of "take" under the federal and state endangered species acts, measures the Project operator is implementing to protect special-status species, reporting requirements, specific measures that each worker shall employ to avoid take of special-status wildlife species, and penalties for violation of the Federal Endangered Species Act and California Endangered Species Act. A fact sheet conveying this information shall be prepared for distribution to contractors, employees, and anyone else who may enter the Project site.

WEAP training shall be documented as follows:

3.4-3a. An acknowledgement form signed by each worker indicating that environmental training has been completed.

3.4-3b. A sticker that shall be placed on hard hats indicating that the worker has completed the environmental training. Construction workers shall not be permitted to operate equipment within the construction area unless they have attended the training and are wearing hard hats with the required sticker.

3.4-3c. A copy of the training transcript/training video and/or training video, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgements forms shall be submitted to the Tulare County Resource Management Agency.

3.4-4 **Burrowing Owl.** A pre-construction clearance survey for burrowing owls (BUOW) shall be conducted by a qualified biologist no less than 14 days prior to the start of construction-related activities in accordance with the protocols adopted by the CDFW *Staff Report on Burrowing Owl Mitigation* (2012). If BUOW are observed on-site or within 500 feet of the site, the following avoidance and minimization measures shall be implemented:

3.4-4.a. A no-disturbance buffer shall be established around occupied burrows. The buffer size may range from 150 feet to 650 feet depending on the time of year and the level of construction-related activity (refer to CDFW 2012).

3.4-4.b. A qualified biologist shall monitor the nest to ensure construction-related activities will not adversely impact the nesting birds and determine when the burrow is no longer occupied.

3.4-4.c. If construction-related activities cannot avoid the active BUOW nest, CDFW shall be consulted regarding passive eviction and mitigation. If necessary, BUOW may be passively relocated from burrows after an exclusion plan is prepared and approved by the CDFW.

3.4-5 **Raptors and Nesting Birds.** To avoid impacts to nesting birds (including Swainson's hawk and raptorial species protected by Sections 3503, 3503.5, and 3513 of the CFGC), activities related to the Project (including, but not limited to, vegetation removal, ground disturbance, and construction- and demolition-related activity), shall occur outside of the bird breeding season (February 1 through August 30 for nesting birds; March 1 through September 31 for Swainson's hawk; but variable based on seasonal and annual climatic conditions). Construction-related activity commencing outside of the nesting season does not require any mitigation. If construction-related activities are scheduled to commence during the breeding season, the following mitigation and avoidance measures will be implemented:

3.4-5.a. A pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal. The survey shall be conducted within the Project site and include a 150-foot buffer for passerines, 500-foot buffer for other raptors, and 0.5-mile buffer for active Swainson's hawk nests. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the region.

3.4-5.b. If nests are found, an appropriate avoidance buffer will be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. For Swainson's hawk nests, an avoidance buffer of up to ½ mile shall be established by a qualified biologist based on the nest location in relation to the Project activity, the line-of-sight from the nest to the Project activity, and observed hawk behavior at the nest.

3.4-5.c. If this buffer is not feasible, or if the Project intends to reduce the buffers based on the previously listed criteria, consultation with CDFW is warranted to discuss how these criteria will be implemented and determine if the Project will avoid take.

3.4-5.d. All construction-related personnel shall be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No ground disturbing activities shall occur within the buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

3.4-5.e. If take cannot be avoided, take authorization through the issuance of an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081(b) is necessary to comply with the California Endangered Species Act.

3.4-6 **Vernal Pool Fairy Shrimp.** To avoid impacts to vernal pool fairy shrimp, the energy generation portions of the Project will be designed and constructed to avoid all mapped potential vernal pool fairy shrimp (VPFS) habitat by 250 feet. Project work that involves rough grading and clearing and grubbing outside of existing roadways and associated right of way, installation of solar arrays and associated facilities, construction staging, and site access, will occur at least 250 feet from potential vernal pool fairy shrimp habitat.

3.4-6.a. If vernal pool fairy shrimp habitat cannot be avoided, the applicant shall provide evidence to the Tulare County Resource Management Agency that a Section 2081 ITP from CDFW for vernal pool fairy shrimp (if determined to be required) has been obtained. If it is determined that an ITP is not required, the Project developer/operator shall provide a letter describing the consultation process and wildlife agency determination, indicating that an ITP is not required. The letter shall also identify the CDFW point of contact and contact information.

Conclusion: ***Less than Significant with Mitigation***

With implementation of **Mitigation Measures 3.4-1 through 3.4-6**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

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 Game or U.S. Fish and Wildlife Service?

Project Impact Analysis: ***Less than Significant Impact with Mitigation***

Four elderberry plants were observed during the reconnaissance-level site visit at the two locations where the White River crosses through the Project site. There is a potential that the proposed Project could impact elderberry plants during clearing and grubbing of the Project site. The proposed Project will be designed to avoid impacts to all mapped elderberry shrub through implementation of **Mitigation Measure 3.4-7**. With the implementation of **Mitigation Measure 3.4-7**, these impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant Impact with Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of Mitigation Measure 3.4-7, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will result in a ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s): ***Less than Significant Impact with Mitigation***

3.4-7 **Elderberry Shrubs.** The Project will be designed to avoid impacts to all mapped elderberry shrub. Prior to construction-related activity, a qualified biologist will identify and flag all individual elderberry shrubs within the Project site during a pre-construction survey. Temporary plastic mesh–type construction fence will be installed at least 20 feet from the driplines of elderberry shrubs adjacent to the Project site to prevent encroachment by construction-related vehicles and personnel.

Conclusion: ***Less than Significant Impact with Mitigation***

With implementation of **Mitigation Measure 3.4-7**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

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?

Project Impact Analysis: ***Less than Significant Impact with Mitigation***

The White River, the ephemeral drainage, the irrigation ditch, and isolated seasonal wetlands are all considered waters of the state and fall under the jurisdiction of the RWQCB under the Porter-Cologne Act. The White River and the ephemeral drainages are also under CDFW jurisdiction pursuant to CFGC. Filling and/or direct removal of any jurisdictional wetland features will constitute a direct impact. The proposed solar array will be designed to avoid direct impacts to jurisdictional areas. Indirect impacts from development could occur if runoff were allowed to enter any water features on-site or adjacent to the Project site and will be considered a significant impact under CEQA. Compliance with the Construction General Permit will require the development of a stormwater pollution prevention plan (SWPPP) for projects disturbing more than one (1) acre. The SWPPP will include Best Management Practices (BMPs) that address runoff. With the implementation of **Mitigation Measure 3.4-8**, these impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant Impact with Mitigation***

The geographic area of this cumulative analysis is the western U.S. While the study area is limited to Tulare County, federally protected wetlands exist in other portions of the U.S., and therefore, cumulative impacts will extend beyond County of Tulare political/jurisdictional boundaries.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.4-8**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will be ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s):

3.4-8 **Jurisdictional Waters.** Potentially jurisdictional features should be demarcated with fencing and avoided. If these features cannot be avoided, a jurisdictional wetland delineation shall be conducted to identify and delineate the jurisdictional extent. Permitting by the RWQCB, and/or CDFW may be required, depending on the jurisdictional scope of each feature. Mitigation for fill would be at 1:1 (one (1) acre of mitigation for each acre of impact) at a minimum. Additional mitigation may be required under agency permits.

Conclusion: ***Less than Significant Impact with Mitigation***

With implementation of **Mitigation Measure 3.4-8**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

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?

Project Impact Analysis: ***Less than Significant Impact***

The Project is located immediately west of an area identified as a Natural Landscape Block (NLB), with a portion of the NLB extending into the east side of one of the Project parcels, west of Road 240. The vast majority (approximately over 95%) of the Project; however, is located outside of the mapped Natural Landscape Block and is not located within any Essential Connectivity Areas. Extensive areas of mapped Natural Landscape Block and documented Essential Connectivity Areas occur within the foothills east of the Project site and provide much higher quality north-south wildlife corridor movement opportunities. The Project site provides limited opportunities for local wildlife movement and given the extent of development and agricultural practices within and surrounding the Project site, development of the Project is not expected to interfere with established resident or migratory wildlife corridors. Therefore, the Project will result in a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, corridors for fish and wildlife with similar habitat requirements may exist in other portions of the San Joaquin Valley.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project is not expected to interfere with established resident or migratory wildlife corridors, a ***Less than Significant Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant.***

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

Project Impact Analysis: ***No Impact***

The County of Tulare's General Plan includes goals and policies to protect biological resources, including of rare and endangered species (ERM 1.1), sensitive habitat (ERM-1.2), and encouraging planting of native vegetation (ERM-1.7). With the implementation of **Mitigation Measures 3.4-1 through 3.4-8** described earlier, impacts on biological resources will be reduced to a less than significant level and there will be no conflict with the General Plan.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will have no impacts to policies or ordinances relating to biological resources. Therefore, there will be ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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?

Project Impact Analysis: ***No Impact***

The Project site is not included in any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plans. ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is California.

There are no adopted Habitat Conservation Plans, which relate to the Project site and its immediate vicinity. Therefore, there will be ***No Cumulative Impacts*** because the proposed Project site is not subject to an HCP or other local, regional or state habitat conservation plan.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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3.5 Cultural Resources

3.5.1 Summary of Findings

The proposed Project would result in ***Less Than Significant Impacts with Mitigation*** to Cultural Resources. The "*Rexford Solar Farm Project Cultural Resources Assessment Report*" was prepared by Rincon Consultants, Inc. and is included in Appendix "E" of this Draft EIR (DEIR). The impact analyses and determinations in this chapter are based upon information obtained from the Cultural Resources Assessment Report. A detailed review of potential impacts is provided in the following analysis.

3.5.2 Introduction

CEQA Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources. If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA.[1] The definition of "historical resources" is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. "Substantial adverse change" is defined as "physical demolition, destruction, relocation, or alteration of the resource…"

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the project site. Provisions for the accidental discovery of historical or unique archaeological resources accidentally discovered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."

This section of the DEIR for the Project meets the CEQA requirements by addressing potential impacts to cultural resources on the Project site. The Environmental Setting section provides a description of cultural resources in the region, with special emphasis on the Project site and vicinity. The Regulatory Setting section provides a description of applicable State and local regulatory policies. Results from CHRIS are included in Appendix "E" of this DEIR. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant, if necessary.

CEQA Thresholds of Significance

Under CEQA Guidelines Section 15064.5 (b) "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

[1] CEQA Section 21084.1.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

(4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.

(5) When a project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources Code Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents."[2]

3.5.3 Environmental Setting

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[3]

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in

[2] CEQA Guidelines, Section 15064.5 (b).

[3] Tulare County General Plan 2030 Update. Page 8-5.

the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."[4]

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167."[5]

"The small community of Ducor, founded in 1885 by four German settlers, is located in the vicinity of the Project site. Its name is a shortened adaptation of the original name, Dutch Corners. Early on, the surrounding land was used for growing grains and grazing cattle and sheep. In 1909 the Ducor Land Company formed, a township was platted, streets were named, and a water system installed. The town grew but remained a small community. Today, it is a census-designated-place, and at the time of the last census had a population of 612 people. Few original structures exist in the town."[6]

3.5.4 Existing Conditions

Previous Studies

On October 11, 2019 and January 2, 2020, Rincon conducted a search of the California Historical Resources Information System from the Southern San Joaquin Information Center (SSJVIC) at California State University, Bakersfield. The SSJVIC records search identified 16 previous studies within a 0.5-mile radius of the Project site. Out of the 16 previous studies, three studies are within the Project site.

Previously Recorded Resources

The SSJVIC records search identified 10 cultural resources documented within a 0.5-mile radius of the Project site. Six of the 10 resources are recorded within the Project site. As summarized in **Table 3.5-1**, these six resources include two prehistoric isolates (P-54-003897 and P-54-003898) and four historic-period built-environment features (P-54-004626, P-54-004832, P-54-004833, and P-54-005222).

[4] Ibid.

[5] Ibid. Page 8-6.

[6] "*Rexford Solar Farm Project Cultural Resources Assessment Report*." Page 18. Prepared by Rincon Consultants, Inc. and included in Appendix "E" of this DEIR.

Table 3.5-1. Previously Recorded Resources within the Project Site

Primary Number	Resource Type	Description
P-54-003897	Prehistoric isolate	Bifacial tool and flake
P-54-003898	Prehistoric isolate	Obsidian flake
P-54-004626	Historic structure	Segment of the Southern Pacific Railroad
P-54-004832	Historic structure	Big Creek East & West Transmission Line
P-54-004833	Historic structure	Telegraph/telephone line
P-54-005222	Historic building	Vestal Substation

Source: Appendix "E" of this DEIR

Field Survey

Rincon conducted a pedestrian survey of the Project site from September 25 to October 11, 2019 and January 6 to January 9, 2020. The pedestrian survey recorded or updated a total of eight (8) resources. These resources consist of: two previously recorded prehistoric isolates: P-54-003897 and P-54-003898; four previously recorded historic-period built features: P-54-004626 (Southern Pacific Railroad), P-54-004832 (Big Creek East & West Transmission Line), P-54-004833 (telegraph/telephone line), and P-54-005222 (Vestal Substation). The pedestrian survey resulted in the identification of two new resources: a historic-period built property at 3700 Highway (SR) 65, and a historic refuse scatter (REX-S-01).

Resource Evaluations

Resources recorded and/or updated as part of the current study were evaluated for CRHR eligibility. A cultural resource is considered historically significant and eligible for the CRHR if it:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2) Is associated with the lives of persons important in our past
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4) Has yielded, or may be likely to yield, information important in prehistory or history

P-54-004626. The pedestrian survey conducted for the proposed Project confirms that the segment of the abandoned SPRR line within the Project site "appears largely as it did at the time of its last recording, with no rails remaining, only the grade demonstrating where the railroad was formerly located. As a result, the segment of the SPRR within the Project site has lost integrity of design, materials, workmanship, feeling and association. The resource is no longer recognizable in its function or use and cannot convey a sense of time and place that can be associated with any historical period of railroad construction or operation within the period of significance of the railroad."[7] Therefore, P-54-004626 is considered ineligible for listing in the CRHR.

[7] "*Rexford Solar Farm Project Cultural Resources Assessment Report*." Page 47. Prepared by Rincon Consultants, Inc. and included in Appendix "E" of this DEIR.

P-54-004832. The segment of the Big Creek East & West Transmission Line is listed in the CRHR and is a contributor to a district listed in the NRHP. The pedestrian survey conducted for the proposed Project "confirms the resource appears largely as it did at the time of the previous surveys with no major alterations and continues to retain sufficient integrity to convey its historical significance."[8]

P-54-004833. "The resource was previously recommended ineligible for listing in the CRHR… The segment of the telegraph/telephone line within the Project site was found to retain many pole structures still standing; however, no wires are present, and most of the poles do not have any hardware, although a few retained insulators. There is no new evidence resulting from the current study to suggest P-54-004833 is now eligible for listing in the CRHR."[9] Therefore, P-54-004833 is considered ineligible for the CRHR.

P-54-005222. "The Vestal Substation is listed in the CRHR and is a contributor to a district determined eligible for the NRHP by consensus through the Section 106 process. The pedestrian survey conducted for the proposed Project was completed from the public right-of-way; therefore visibility of all of the features on the property was limited. Aerial photography suggests additional equipment was developed near the center of the property, to the north of the 1963 shop building, which may have resulted in the moving or removal of one of the circa 1970-1994 prefabricated buildings. However, those buildings were not identified as contributing elements to the property's historical significance. The remainder of the property appears largely the same as when it was last recorded, and the property retains sufficient integrity to continue conveying its historical significance."[10]

Property at 3700 Highway 65. "Like many other properties in the area, this property was utilized as a personal residence with adjacent agricultural land that was farmed for commercial purposes. Archival research did not demonstrate the property played a significant role in the agricultural development or history of the county, state, or nation. Therefore, the subject property is recommended ineligible for listing under Criterion 1. The property is associated with the Carlisle family, but it is one of several parcels in Tulare County that has been owned and farmed by Carlisle family members. Archival research did not demonstrate the Carlisle's played a highly significant role or made critical contributions to the development of the community of Ducor or Tulare County. Hence, the subject property is recommended ineligible for listing under Criterion 2.

As vernacular buildings with visible alterations, the buildings comprising the farm complex do not embody the distinctive characteristics of a type, period, or method of construction, nor do they represent the work of a master or possess high artistic values. The residence, tank house, garage, and ancillary building display alterations such as additions or porch enclosures, non-original vinyl-sash windows and awnings, and non-original doors. The rural nature of the area lends it to retaining many examples of the aforementioned types of farm buildings and structures, making those on the subject property ubiquitous types of their style and construction. The property also does not appear to contribute to any known or potential historic districts. Taking all of this into consideration, the subject property does not appear eligible for listing under Criterion 3. Lastly, a review of available evidence and records search results did not indicate the property may yield important information about prehistory or history. As a result, the property is recommended ineligible under Criterion 4. Based on

[8] Ibid.

[9] "*Rexford Solar Farm Project Cultural Resources Assessment Report*." Pages 47-48. Prepared by Rincon Consultants, Inc. and included in Appendix "E" of this DEIR.

[10] Ibid. Page 48.

these considerations, this property is considered ineligible for listing in the CRHR under all four criteria (1-4)."[11]

REX-S-01. "REX-S-01 consists of a historic-period refuse scatter comprised of various metal cans and building materials. A search of the Bureau of Land Management General Land Office records indicates that the land on which the site was identified was granted to Southern Pacific Railroad Co. on December 12, 1874. As a simple, likely single dumping event, refuse scatter REX-S-01 cannot be directly associated with the SPRR. Additionally, the previously recorded section of the SPRR in the proximity of REX-S-01 (P-54-004626) has been determined ineligible for listing [in the CRHR]. The site cannot be associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (does not meet Criterion 1), nor can it be associated with the lives of persons important in our past (does not meet Criterion 2). No information was identified that would indicate past owners of the land were important persons in Tulare County's history. As a scatter of ordinary mid-century refuse, the resource does not embody any distinctive characteristics (does not meet Criterion 3). Twentieth-century refuse scatters are ubiquitous throughout the region. REX-S-01 likely represents a single dumping episode and cannot provide information relating to resource use trends or long-term resource availability in the region. The site is a surface scatter of artifacts and its data potential was exhausted by this recording (does not meet Criterion 4). Therefore, REX-S-01 is considered ineligible for listing in the CRHR under all four criteria (1-4)."[12]

3.5.5 Regulatory Setting

Federal

National Historic Preservation Act

The Advisory Council on Historic Preservation (ACHP) is an independent federal agency with the primary mission to encourage historic preservation in the government and across the nation. The National Historic Preservation Act (NHPA), which established the ACHP in 1966, directs federal agencies to act as responsible stewards when their actions affect historic properties. The ACHP is given the legal responsibility to assist federal agencies in their efforts and to ensure they consider preservation during project planning reviews federal programs and policies to promote effectiveness, coordination, and consistency with national preservation policies. A key ACHP function is overseeing the federal historic preservation review process established by Section 106 of the NHPA. Section 106 requires federal agencies to consider the effects of projects, carried out by them or subject to their assistance or approval, on historic properties and provide the ACHP an opportunity to comment on these projects prior to a final decision on them. The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources.[13]

[11] Ibid.

[12] **"***Rexford Solar Farm Project Cultural Resources Assessment Report*." Page 49. Prepared by Rincon Consultants, Inc. and included in Appendix "E" of this DEIR.

[13] *Advisory Council on Historic Preservation. https://www.achp.gov/sites/default/files/documents/2018-06/AboutTheACHPFactSheet2015v3_1.pdf.*

State

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.[14]

Among OHP's responsibilities are to identify, evaluate, and register historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in California State University Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.[15]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.[16]

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

"(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1; Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

[14] *Advisory Council on Historic Preservation, State Historic Preservation Officers, http://www.achp.gov/shpo.html*

[15] *California Office of Historic Preservation, About OHP, http://ohp.parks.ca.gov/?page_id=1066*

[16] California Office of Historic Preservation. California Register. http://www.ohp.parks.ca.gov/?page_id=21238.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1; Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important to our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.[17]

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1."[18]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

"(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

[17] Ibid.

[18] CEQA Guidelines. Section 15064.5(a).

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process."[19]

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to Public Resources Code § 5097.98, which provides specific guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

"(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act."[20]

"(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner or the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The mostly descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

[19] Ibid. Section 15064.5(c).

[20] CEQA Guidelines, Section 15064.5(d).

(2) Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."[21]

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."[22]

Assembly Bill 52

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Existing law establishes the NAHC and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to prevent severe and

[21] CEQA Guidelines, Section 15064.5(e).

[22] CEQA Guidelines, Section 15064.5(f).

irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintain an inventory of sacred places.[23]

Upon written request, the NAHC is required to conduct a Sacred Lands File search for sites located on or near a project site. As discussed in further detail in Chapter 3.18 Tribal Cultural Resources, a Sacred Lands File check indicated negative results (that is, no Sacred Lands were identified) for the Project location. Also discussed in further detail in Chapter 3.18, an opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52, and three (3) tribes responded to the consultation requests within the mandatory response time-frames; therefore, this DEIR has been completed consistent and compliant with AB 52 (see Appendix ”E” of the DEIR regarding the Tribal consultation process).

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

ERM-6.2 Protection of Resources with Potential State or Federal Designations. The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation’s California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources. When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation. If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

3.5.6 Impact Evaluation

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Project Impact Analysis: ***Less than Significant with Mitigation***

Five historic-period built-environment resources were identified within the Project site. This includes four previously recorded resources (P-54-004626, P-54-004832, P-54-004833, and P-54-005222), and one resource identified during the pedestrian survey: the property at 3700 Highway 65.

[23] Native American Heritage Commission, About the Native American Heritage Commission, http://nahc.ca.gov/about/, accessed December 2019

The property at 3700 Highway (SR) 65 was evaluated for listing in the CRHR and recommended ineligible under all four criteria (1-4). Of the four previously recorded built environment resources, two (P-54-004626 and P-54-004833) are ineligible for listing in the CRHR.

The Southern California Edison Vestal Substation (P-54-005222) has been determined eligible for listing in the NRHP as a contributor to a historic district; and therefore, is also listed in the CRHR as a historical resource.

The Big Creek East & West Transmission Line (P-54-004832) is listed in the NRHP as a contributing element of a historic district; and therefore, is also listed in the CRHR as a historical resource.

While the proposed Project involves the installation of collector lines and generation ties (and possibly the construction of an operations and maintenance building and transmission facilities), the Project will not demolish or directly alter either of the two historical resources. The proposed Project elements are consistent and compatible with the current nature and use of the SCE Vestal Substation and Big Creek East & West Transmission Line facilities by generating and providing electrical energy. Construction of the proposed Project will not result in a significant impact to either of these two historical resources as defined by CEQA Guidelines §15064.5. Both resources will continue to retain the physical characteristics that convey their historical significance which qualified them for NRHP eligibility and CRHR listing.

However, there is a possibility that buried subsurface resources could be uncovered during construction and earth-disturbing activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 3.5-1**, the Project-specific impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant with Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-1**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will be considered ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s)

3.5-1 In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the portion of the Project site where the resource is discovered, be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the specialists shall provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recovery, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.

Conclusion: ***Less than Significant with Mitigation***

With implementation of **Mitigation Measure 3.5-1**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

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

Project Impact Analysis: ***Less than Significant with Mitigation***

The records search identified two previously recorded archaeological isolates within the Project site (P-54-003897 and P-54-003898). The pedestrian survey was unable to relocate either of the previously recorded archaeological isolates. One archaeological resource, REX-S-01 (a historic-aged refuse scatter), was identified during the pedestrian survey. This resource was recorded and evaluated for listing in the CRHR and is recommended ineligible under all four criteria (1-4).

Cultural resource survey crews observed heavy disturbance throughout the Project site from agricultural activities. Historic aerial imagery indicates that this disturbance has been constant for at least the past 50 years. Despite this heavy disturbance, the Project site is traversed by the White River. Water sources such as the White River provide an abundance of natural resources and are generally favorable for human habitation; thus, areas surrounding rivers are almost ubiquitously considered sensitive for cultural resources. Additionally, rivers often result in alluvial deposition in their floodplains, which can result in the burying of archaeological deposits. Although no significant archaeological resources were identified during the current study, the presence of the White River increases the likelihood of subsurface archaeological resources are present in the area. Therefore, there is a possibility that buried subsurface resources could be uncovered during construction and earth-disturbing activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. However, with the implementation of **Mitigation Measure 3.5-1**, these impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant with Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-1**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will also be considered ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s): ***See Mitigation Measure 3.5-1.***

Conclusion: ***Less than Significant with Mitigation***

With implementation of ***Mitigation Measure 3.5-1***, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Project Impact Analysis: ***Less than Significant with Mitigation***

The records search and background research confirmed that no human remains are known to exist on the Project site. However unlikely, there is a possibility that subsurface resources could be uncovered during construction and earth-disturbing activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. However, with the

implementation of **Mitigation Measure 3.5-2**, these impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant with Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-2**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will also be considered ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s)

3.5-2 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and
    b. If the coroner determines the remains to be Native American:
        i. The coroner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
        iii. The most likely descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or
2. Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
    a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
    b. The descendant fails to make a recommendation; or

c. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Conclusion: ***Less than Significant with Mitigation***

With implementation of **Mitigation Measure 3.5-2**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

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3.6 Energy

3.6.1 Summary of Findings

Based on the impact analysis below, potential impacts to Energy as a result of the proposed Project are determined to be ***Less Than Significant***. The impact determinations in this chapter are based upon information obtained from the Project Description, the estimates of pertinent energy-related consumption contained in the "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study"* prepared by Rincon Consultants, Inc. (Appendix "C" of this Draft EIR [or DEIR]), and State of California energy-related sources that are publicly and readily available. A detailed review of potential impacts is provided in the following analysis.

3.6.2 Introduction

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emission of pollutants during both the production and consumption phases. Energy usage is typically quantified using the British Thermal Unit (BTU). The BTU is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit. As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 123,000 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively. Natural gas usage is expressed in therms. A therm is equal to 100,000 BTU.

Energy conservation is embodied in many federal, state and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple areas. Also, as described further in this section, the Tulare County General Plan currently contains policies that promotes energy conservation and efficiency measures, energy conservation awareness, and renewable energy.

CEQA Requirements

"In 1974, the Legislature adopted the Warren-Alquist State Energy Resources Conservation and Development Act. (Pub. Resources Code, § 25000 et seq.) That act created what is now known as the California Energy Commission, and enabled it to adopt building energy standards. (See, e.g., id. at § 25402.) At that time, the Legislature found the "rapid rate of growth in demand for electric energy is in part due to wasteful, uneconomic, inefficient, and unnecessary uses of power and a continuation of this trend will result in serious depletion or irreversible commitment of energy, land and water resources, and potential threats to the state's environmental quality." (Id. at § 25002; see also § 25007 ("It is further the policy of the state and the intent of the Legislature to employ a range of measures to reduce wasteful, uneconomical, and unnecessary uses of energy, thereby reducing the rate of growth of energy consumption, prudently conserve energy resources, and assure statewide environmental, public safety, and land use goals."))

The same year that the Legislature adopted Warren-Alquist, it also added section 21100(b)(3) to CEQA, requiring environmental impact reports to include "measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." As explained by a court shortly after it was enacted, the

"energy mitigation amendment is substantive and not procedural in nature and was enacted for the purpose of requiring the lead agencies to focus upon the energy problem in the preparation of the final EIR." (People v. County of Kern (1976) 62 Cal.App.3d 761, 774 (emphasis added)). It compels an affirmative investigation of the Project's potential energy use and feasible ways to reduce that use.

Though Appendix F of the CEQA Guidelines has contained guidance on energy analysis for decades, implementation among lead agencies has not been consistent. (See, e.g., California Clean Energy Committee v. City of Woodland, supra, 225 Cal.App.4th 173, 209.) While California is a leader in energy conservation, the importance of addressing energy impacts has not diminished since 1974. On the contrary, given the need to avoid the effects of climate change, energy use is an issue that we cannot afford to ignore. As the California Energy Commission's Integrated Energy Policy Report (2016) explains:

> Energy fuels the economy, but it is also the biggest source of greenhouse gas emissions that lead to climate change. Despite California's leadership, Californians are experiencing the impacts of climate change including higher temperatures, prolonged drought, and more wildfires. There is an urgent need to reduce greenhouse gas emissions and increase the state's resiliency to climate change. With transportation accounting for about 37 percent of California's greenhouse gas emissions in 2014, transforming California's transportation system away from gasoline to zero emission and near-zero-emission vehicles is a fundamental part of the state's efforts to meet its climate goals. Energy efficiency and demand response are also key components of the state's strategy to reduce greenhouse gas emissions. (Id. at pp. 5, 8, 10.) Appendix F was revised in 2009 to clarify that analysis of energy impacts is mandatory. OPR today proposes to add a subdivision in section 15126.2 on energy impacts to further elevate the issue, and remove any question about whether such an analysis is required."[1]

Further, an "Explanation of Proposed Amendments" contained in the Proposed Update (and now adopted amendments) to the CEQA Guidelines documents stated that OPR proposed to add a new subdivision (b) to section 15126.2 which discusses the required contents of an environmental impact report. The new subdivision would specifically address the analysis of a project's potential energy impacts. This addition is necessary for several reasons explained as follows.[2]

> "The first sentence clarifies that an EIR must analyze whether a project will result in significant environmental effects due to "wasteful, inefficient, or unnecessary consumption of energy." This clarification is necessary to implement Public Resources Code section 21100(b)(3). Since the duty to impose mitigation measures arises when a lead agency determines that the project may have a significant effect, section 21100(b)(3) necessarily requires both analysis and a determination of significance in addition to energy efficiency measures. (Pub. Resources Code, § 21002.)
>
> The second sentence further clarifies that all aspects of the project must be considered in the analysis. This clarification is consistent with the rule that lead agencies must consider the "whole of the project" in considering impacts. It is also necessary to ensure that lead agencies consider issues beyond just building design. (See, e.g., California Clean Energy Com. v. City of Woodland, supra, 225 Cal.App.4th at pp. 210-212.) The analysis of vehicle miles traveled

[1] State of California. Office of Planning and Research. Proposed Update to the CEQA Guidelines/ November 2017. Pages 65-66. http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf. Accessed February 2020.

[2] Ibid. Page 66.

> provided in proposed section 15064.3 (implementing Public Resources Code section 21099 (SB 743)) on transportation impacts may be relevant to this analysis.
>
> The third sentence signals that the analysis of energy impacts may need to extend beyond building code compliance. (Ibid.) The requirement to determine whether a project's use of energy is "wasteful, inefficient, and unnecessary" compels consideration of the project in its context. (Pub. Resources Code, § 21100(b)(3).) While building code compliance is a relevant factor, the generalized rules in the building code will not necessarily indicate whether a particular project's energy use could be improved. (Tracy First v. City of Tracy (2009) 177 Cal.App.4th 912, 933 (after analysis, lead agency concludes that project proposed to be at least 25% more energy efficient than the building code requires would have a less than significant impact); see also CEQA Guidelines, Appendix F, § II.C.4 (describing building code compliance as one of several different considerations in determining the significance of a project's energy impacts).) That the Legislature added the energy analysis requirement in CEQA at the same time that it created an Energy Commission authorized to impose building energy standards indicates that compliance with the building code is a necessary but not exclusive means of satisfying CEQA's independent requirement to analyze energy impacts broadly.
>
> The new proposed [now adopted] subdivision (b) also provides a cross-reference to Appendix F. This cross-reference is necessary to direct lead agencies to the more detailed provisions contained in that appendix. Finally, new proposed [now adopted] subdivision (b) cautions that the analysis of energy impacts is subject to the rule of reason, and must focus on energy demand actually caused by the project. This sentence is necessary to place reasonable limits on the analysis. Specifically, it signals that a full "lifecycle" analysis that would account for energy used in building materials and consumer products will generally not be required. (See also Cal. Natural Resources Agency, Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 (Dec. 2009) at pp. 71-72).[3]

Specifically, Section 15121.6 added new sub-section (b), to wit: "(b) Energy Impacts. If the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy, the EIR shall analyze and mitigate that energy use. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project. (Guidance on information that may be included in such an analysis is presented in Appendix F.) This analysis is subject to the rule of reason and shall focus on energy demand that is caused by the project. This analysis may be included in related analyses of air quality, greenhouse gas emissions or utilities in the discretion of the lead agency."[4]

CEQA Thresholds of Significance

- Result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy resources.
- Conflict with state or local plan for renewable energy or energy efficiency

[3] Op. Cit. Pages 66-67.

[4] Op. Cit. Pages 67-68.

3.6.3 Environmental Setting

"Southern California Edison provides electric service to the majority of Tulare County, including the majority of the San Joaquin Valley and the foothills. Natural gas service is primarily provided by The Gas Company (formerly Southern California Gas Company). Pacific Gas & Electric also serves northern Tulare County's electric needs on a limited basis. The electrical facilities network includes both overhead and underground lines, with new development required to install underground service lines. All utility providers indicate that additional service should be available to new development, depending on the necessary load of the services requested."[5]

3.6.4 Existing Conditions

Electrical and natural gas services for the Project are provided by Southern California Edison (SCE), and Southern California Gas Company (SoCal Gas), respectively. In 2018, SCE provided 4,512.913836 gigawatt-hours (GWh) of electricity to Tulare County customers.[6] Also in 2018, SoCal Gas provided a total of 157.285390 million therms in Tulare County.[7] See **Table 3.6-1** below.

Table 3.6-1. 2018 County and State Energy Demands on Energy Providers Southern California Gas and Southern California Edison

Demand by:	Electricity (GWh)	Gas (in Therms)
Tulare County	4,512.913836	157.285390
SCE Service Area	104,406.633392[8]	--
SoCal Gas Service Area	--	7,224.192073[9]

3.6.5 Regulatory Setting

Federal

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and United States Environmental Protection Agency (USEPA) jointly administer the CAFE standards.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle

[5] Tulare County General Plan 2030 Update Recirculated Draft EIR. 3.4 Energy and Global Climate Change. February 2010. Page 3.4-13. http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf

[6] California Energy Commission. California Energy Consumption Database. Electricity Consumption by County. http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed March 2020.

[7] Ibid. Gas Consumption by County. http://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed March 2020.

[8] Op. Cit. http://ecdms.energy.ca.gov/elecbyplan.aspx. Accessed March 2020.

[9] Op. Cit. http://ecdms.energy.ca.gov/gasbyplan.aspx. Accessed March 2020.

type.[10] USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[11]

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The act included the first increase in fuel economy standards for passenger cars since 1975, and also included a new energy grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

State

California Energy Commission

The California Energy Commission (CEC) was created in 1974 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy.

Assembly Bill 32: California Global Warming Solutions Act of 2006

California Global Warming Solutions Act of 2006 (Assembly Bill 32) Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission and CEC with providing information, analysis, and recommendations to the California Air Resources Board regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the Renewables Portfolio Standard (RPS) goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045.[12]

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[10] U.S. Environmental Protection Agency. Final Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles. September 5, 2011. https://www.govinfo.gov/content/pkg/FR-2011-09-15/pdf/2011-20740.pdf

[11] U.S. Environmental Protection Agency. Final Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2. October 25, 2016. https://www.govinfo.gov/content/pkg/FR-2016-10-25/pdf/2016-21203.pdf

[12] Senate Bill 100. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB100. Accessed February 2020.

Low-Carbon Fuel Standard

The Low-Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with 0.25 percent in 2011 and culminating in a 10 percent total reduction in 2020. Petroleum importers, refiners and wholesalers can either develop their own low-carbon fuel products, or buy LCFS credits from other companies that develop and sell low-carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.

Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle (ZEV) regulations to require manufactures to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEVs) between 2018 and 2025.

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and nonresidential buildings.

Local

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County that support reduction efforts of GHG. General Plan policies that relate to the proposed Project are listed as follows:

AG-2.11 Energy Production. The County shall encourage and support the development of new agricultural related industries featuring alternative energy, utilization of agricultural waste, and solar or wind farms.

ERM-4.1 Energy Conservation and Efficiency Measures. The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new construction and renovation of existing structures in accordance with State law.

ERM-4.3 Local and State Programs. The County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources.

ERM-4.6 Renewable Energy. The County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind, solar, bio-fuels and co-generation.

3.6.6 Impact Evaluation

Would the Project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Project Impact Analysis: ***Less than Significant Impact***

Electricity. Electricity is not expected to be consumed in large quantities during construction- or decommissioning-related activities, as construction equipment and vehicles are not electric powered (the majority of construction equipment is either diesel- or gas-powered). Therefore, electricity associated with construction- or decommissioning-related activities was not calculated. Electricity required during operation (e.g., to operate lights and air conditioners) will be offset by the electricity produced by the solar facility. As discussed in Section 3.8, Greenhouse Gas Emissions, of this EIR, construction and operation of renewable energy facilities will offset GHG emissions by replacing energy generated by fossil-fueled power plants. The Project will generate approximately 1,566 GWh of solar-generated electricity each year that will be added to the power grid and be used in place of electricity generated by fossil-fuel sources. Based on these considerations, the Project will have a ***Less than Significant Impact*** on electricity consumption.

Natural Gas. Natural gas is not expected to be consumed in large quantity during construction-, decommissioning-, or operation-related activities by construction equipment (i.e., no natural gas-powered equipment or vehicles). Water necessary for construction-, decommissioning-, and operational-related activities will be supplied from an existing on-site or off-site, natural gas-powered well. During the construction period of up to 24 months, the proposed Project will use up to approximately 400 acre-feet of water for construction-related activities. Operational water demands, which include water used for fire suppression, solar PV panel washing, and operation of the proposed operations and maintenance (O&M) building, will total approximately 50 acre-feet per year.

The Project is located in an area that has historically supported agricultural production, and although the site is not currently irrigated, it has been in the past. Previous irrigation water was provided via groundwater pumped on site. Implementation of the Proposed Project will replace past, present, or future agricultural water uses on the Project site. Therefore, natural gas associated with use of the natural gas-powered well by the Project will be substantially less than the quantity used previously when the property was irrigated. The Project will have a ***Less than Significant Impact*** on natural gas consumption.

Gasoline and Diesel. Construction-related activities of the Project will result in fuel consumption from the use of construction tools and equipment, haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Project construction-related activities is expected to consume a total of approximately 410,000 gallons of diesel fuel from construction equipment and vendor, hauling, and water truck trips, and approximately 75,000 gallons of gasoline from construction worker vehicle trips. Construction-related activities and corresponding fuel energy consumption will be temporary and localized, as the use of diesel fuel and heavy-duty equipment will not be a typical condition of the Project. The gasoline consumed during construction represents approximately 0.04 percent of all gasoline sold within Tulare County in 2018. The diesel consumed during Project construction will represent approximately 1.4 percent of all diesel sold in Tulare County in 2018. In addition, there are no unusual Project characteristics that will cause the use of construction-related equipment to be less energy efficient compared with other similar

construction sites in other parts of the State. Therefore, construction-related fuel consumption by the Project will not result in inefficient, wasteful, or unnecessary energy use compared with other construction sites in the region. The Project will have a ***Less than Significant Impact*** on gasoline and diesel consumption.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County and the SCE and SoCal Gas companies' service areas.

As noted above, the proposed Project will result in energy resource demands during construction-, O&M-, and decommissioning-related activities. However, similar to the proposed Project, discretionary actions requiring agency approval must comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. Furthermore, construction- and operation-related activities of the proposed Project will offset GHG emissions by replacing energy typically generated by fossil-fueled power plants. The Project will generate solar-generated electricity that will be added to the power grid and be used in place of electricity generated by fossil-fuel sources. Therefore, it is not anticipated that the Project's contribution to cumulative impacts will result in a significantly considerable wasteful use of energy resources, such that the Project, and other cumulative projects, will have a cumulative effect on energy conservation. Cumulative impacts as of a result of the Project-related construction-, O&M-, and decommissioning-related activities will be ***Less Than Significant.*** During its life, the Project is anticipated to result in a benefit to this resource as it will offset GHG emissions and further local, state, and federal clean energy objectives, goals, regulations, mandates, etc. Also, see discussion at Item b), below.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Project Impact Analysis: ***No Impact***

The proposed Project will result in the construction, operation, and decommissioning of an approximately 700 MW solar facility, including an energy storage system with up to 700 MW storage capacity, which will produce a new source of renewable energy in Tulare County. Therefore, the Project will directly support SB 100, which mandates that 100 percent of electricity in California be obtained by zero-carbon energy sources by 2045 and updates the state's Renewable Portfolio Standards (RPS). Additionally, the Project will support the following Tulare County General Plan Policies because it will assist the County in encouraging the development of renewable energy sources.

- **AG-2.11 Energy Production.** The County shall encourage and support the development of new agricultural related industries featuring alternative energy, utilization of agricultural waste, and solar or wind farms.
- **ERM-4.6 Renewable Energy.** The County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind, solar, bio-fuels and co-generation.

As described above, the Project will require diesel and gasoline fuel, natural gas, as well as minimal amounts of electricity throughout the life of the Project. However, this amount of energy required by the Project will be offset by the Project's generation of electricity.

In terms of energy usage from heavy-duty vehicles used during construction-related activities, the U.S. Environmental Protection Agency and National Highway Traffic Safety Administration (NHTSA) established a comprehensive Heavy-Duty National Program that would reduce greenhouse gas emissions and increase fuel efficiency for on-road heavy-duty vehicles beginning with model year 2014.[13] CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation also requires diesel trucks that operate in California to be upgraded to reduce emissions, such that by 2023 nearly all trucks would have 2010 model year engines or equivalent.[14] Vehicles used during Project construction-related activities will already incorporate these standards; therefore, the Project will not impede the efficient use of fuel for heavy-duty vehicles. Off-road equipment during construction will be subject to off-road equipment regulations such as Tier 4 standards or the Off-Road Regulation implemented by CARB, and will therefore not impede the implementation of CARB's energy efficiency programs. Additionally, the use of diesel fuel for heavy-duty vehicles and off-road equipment will not be a typical condition of the Project during operation; therefore, the Project will not conflict with the implementation of fuel efficiency plans.

In terms of light-duty vehicle energy usage, as described above, NHTSA required manufacturers of light-duty vehicles to meet an estimated combined passenger car and light truck average fuel economy level of 34.1 miles per gallon (mpg) by model year 2016. In the course of more than 30 years, the National Energy Conservation Policy Act regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet, and has also protected against inefficient, wasteful, and unnecessary use of energy. Additionally, CARB's Advanced Clean Cars Program will continue to improve fuel efficiency and reduce gasoline use through an increase of zero-emission vehicles and plug-in hybrid electric vehicles. Vehicles used by Project construction-related activities, decommissioning-related activities, and maintenance workers will already incorporate these standards and programs; therefore, the Project will not impede the efficient use of fuel for light-duty vehicles.

The operation and maintenance building will be subject to Building Energy Efficiency Standards as required by California Code of Regulations, Title 24, Part 6. The Building Energy Efficiency Standards are intended to save energy, increase electricity supply reliability, and avoid the need to construct new power plants. Pursuant to the California Building Standards Code and the Energy Efficiency Standards, the County will review the design components of the Project's energy conservation measures when the Project's building plans are submitted. These measures could include: insulation; use of energy-efficient heating, ventilation and air conditioning equipment (HVAC); solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems, and other measures.

Since the Project will provide a new source of renewable energy supporting the State's energy goals, offset its fuel usage, and comply with fuel and energy efficiency regulations, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and ***No Impact*** will occur.

[13] U.S. Environmental Protection Agency. Final Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles. September 5, 2011. https://www.govinfo.gov/content/pkg/FR-2011-09-15/pdf/2011-20740.pdf

[14] California Air Resources Board. Truck and Bus Regulation Compliance Requirement Overview.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County and the SCE and SoCal Gas companies' service areas.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there will be ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

3.7 Geology and Soils

3.7.1 Summary of Findings

The proposed Project will result in ***Less Than Significant Impacts with Mitigation*** related to Geology and Soils. The "*CEQA Level Geotechnical Study*" was prepared by Stantec Consulting Services Inc. (Stantec), which is included in Appendix "F" of this Draft EIR (or DEIR). The impact analyses and determinations in this chapter are based upon information obtained from the *CEQA Level Geotechnical Study* prepared for the Project. A detailed review of potential impacts is provided in the following analysis.

3.7.2 Introduction

CEQA Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Geology and Soils. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2(a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Geology and Soils in the County. The Regulatory Setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes

[1] CEQA Guidelines Section 15126.2.

the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item as follows:

- 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.
- Result in substantial soil erosion or the loss of topsoil.
- 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.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.7.3 Environmental Setting

“Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges.”[2]

[2] Tulare County General Plan 2030 Update. *Background Report.* Page 8-5.

"Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building."[3]

"Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered "potentially active."[4]

"Settlement can occur in poorly consolidated soils during groundshaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to groundshaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County."[5]

"Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted."[6]

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[3] Ibid.

[4] Tulare County General Plan 2030 Update. *Background Report*. Page 8-5.

[5] Ibid. Page 8-9.

[6] Op. Cit.

Earthquake Hazards

"Groundshaking is the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of groundshaking, which is directly related to the magnitude of a quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased groundshaking over longer periods of time, thereby affecting a larger area. Groundshaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake."[7]

"There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault.** The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the "Central California Active Area," where many earthquakes have originated.
- **Owens Valley Fault Group.** The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- **Clovis Fault.** The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, and is therefore classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts."[8]

"Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County's buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake-resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings as a safety issue during earthquakes.

[7] Op. Cit. Pages 8-7

[8] Op. Cit. Pages 8-6 to 8-7.

In high risk areas (Bay Area) inventories and programs to mitigate this issue are required. Because Tulare County is not a high risk area, state law only recommends that programs to retrofit URMs are adopted by jurisdictions."[9]

Liquefaction

"The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake."[10]

"No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction."[11]

Landslides

"Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces)."[12]

Paleontological Resources

Paleontological resources comprise of fossils – the remains or traces of once-living organisms preserved in sedimentary deposits – together with the geologic context in which they occur. Sedimentary deposits include unconsolidated or semi-consolidated "soils" or sedimentary rocks. Most fossil remains are the preserved hard parts of plants or animals, and include bones and/or teeth of once-living vertebrate animals, shells or body impressions of invertebrate animals, and impressions

[9] Op. Cit. Page 8-8.

[10] Op. Cit. Page 8-7.

[11] Op. Cit. Page 8-9.

[12] Op. Cit. Page 8-10.

or carbonized or mineralized parts of plants (e.g. “petrified wood”). Trace fossils include preserved footprints, trackways, and burrows of prehistoric animals and root marks created by plants.

Fossils are scientifically important as they provide the only available direct evidence of the anatomy, geographic distribution, and paleoecology of organisms of the past. Scientific studies based on fossils and comparisons between them continue to refine details of the basic history of life. In conjunction with physical geologic investigations, the use of fossils as indicators of geologic time and ancient environments also contributes to understanding of the physical history of the earth, the distribution of mineral resources, dynamics of earth processes, and past climatic changes.

3.7.4 Existing Conditions

Regional Geology

The Project site is located in the southeastern portion of the Great Valley Geomorphic Province in Central California. This region is characterized as a 50-mile-wide and 400-mile-long sediment- filled trough in which the sediments have been deposited, almost continuously, since the Jurassic period. The Project site resides in the portion of the Province drained by surface runoff into the White River.[13]

Subsurface Conditions

The Project site is underlain by Quaternary alluvium (Qal) deposits, Pleistocene non-marine sedimentary (Qc) deposits, late Pliocene to early Pleistocene Plio-Pleistocene non-marine sedimentary (Qp) deposits, and Quaternary non-marine terrace (Qt) deposits. A description of these subsurface deposits are provided in the “*CEQA Level Geotechnical Study*” (Appendix “F” of this DEIR).

Regional Groundwater

The Project area overlies the Tule Subbasin. The Tule Subbasin is a portion of the San Joaquin Valley Groundwater Basin that is almost entirely within Tulare County. The basin is bounded on the north by various water districts, the largest of which is the Lower Tule River Irrigation District, on the east by the Sierra Nevada Mountain Range, and on the south and west by the Tulare County line.

Static groundwater was not encountered on the Project site. Based on groundwater data from an offsite groundwater production well located approximately 1.1 miles northwest to 4.4 miles southwest of the Project site, groundwater is expected to be encountered at a depth of approximately 480 feet bgs and flows to the west. Groundwater levels may fluctuate in the future due to rainfall, irrigation, broken pipes, or changes in site drainage.[14]

Regional Seismicity

The Project site is located within a highly active seismic zone. The estimated distance of the Project site to the nearest expected surface expression of an active fault is presented in **Table 3.7-1**. The nearest fault is the White Wolf Fault located approximately 45.8 miles southeast of the Project site.

[13] “*CEQA Level Geotechnical Study*.” Page 14. Prepared by Stantec and included in Appendix “F” of this DEIR.

[14] Ibid. Page 15.

Table 3.7-1. Faults within 60 Miles of the Project Area[15]

Fault	Distance	Maximum Moment Magnitude
White Wolf	45.8	7.2
Great Valley 14 (Kettleman Hills)	50.7	7.2
Pleito	58.9	7.1
South San Andreas	60.1	8.1

Fault Rupture

The Project site is not located within a currently mapped Alquist-Priolo Special Studies Fault Zone. No active faults are known to underlie or Project toward the Project site. Therefore, the probability of surface fault rupture at the Project site from a known active fault is considered low.

Strong Ground Shaking

The Project site is located on the Valley floor. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. Strong ground shaking can be expected at the Project site during moderate to severe earthquakes in the general region.

Liquefaction

"The Project site is not located within a current, mapped California Liquefaction Hazard Zone. In addition, groundwater in the Project area is expected to be approximately 480 feet below the ground surface. Based on the near surface soil conditions and depth to groundwater, the potential for inception of liquefaction and liquefaction-related ground failure is low."[16]

Lateral Spreading

"Due to the low potential for liquefaction, the depth of groundwater, and the fact that the site is not located near free faces or bodies of water, the potential for lateral spreading is considered low."[17]

Subsidence

"Groundwater levels near the site in the San Joaquin Valley where the Project site is located have declined more than 450 feet since the 1960s. These groundwater-level declines have caused the aquifer system to compact, resulting in land subsidence. Land subsidence within the San Joaquin Valley has been most recently evaluated by the USGS through the use of Interferometric Synthetic Aperture Radar between 2011 and 2015. Based on these recent studies, parts of the Project site west of the town of Ducor are within an area that has sustained up to seven inches of subsidence between 2011 and 2015 due to groundwater draw down (USGS 2020). Due to the depth of groundwater and

[15] Ibid. Page 15.

[16] Ibid. Page 17.

[17] Ibid.

the fact that the Project site is located in a mapped subsidence area, the potential for subsidence is considered moderate to high."[18]

Soils

Sixteen soils belonging to nine soil series are mapped underlying the Project area. **Table 3.7-2** provides a list and a description of the soil series located within the Project area.

Expansive Soils

The near-surface soils encountered during the geotechnical investigation for Project are mostly sandy soils whose expansion potential is considered low.

Table 3.7-2. Area of Interest Soils[19]

Soils	Soil Series
Centerville clay, 15 to 30 percent slopes	Centerville soils are well-drained and formed in alluvium from mostly granitic sources. This soil series is found on alluvial fans and dissected stream terraces with slopes of 0 to 30 percent at elevations of 25 to 2100 feet. These moderately alkaline soils have slow permeability and are used mainly for irrigated oranges and dryland barley, wheat, and rangeland.
Centerville clay, 2 to 5 percent slopes	
Centerville clay, 2 to 9 percent slopes	
Colpien loam, 0 to 2 percent slopes	Colpien soils are very deep, moderately well-drained, and found on terraces that formed in alluvium from mostly granitic rock. This soil series has slopes of 0 to 2 percent at elevations of 220 to 550 feet. These soils are neutral to moderately alkaline, have moderately slow permeability and are used as irrigated cropland to grow a variety of crops and produce, dairy and cattle production, and building site development.
Delvar clay loam, 2 to 9 percent slopes	Delvar soils are very deep, well-drained and formed in mixed alluvium from granitic and metasedimentary rock. This soil series is found on alluvial fans and stabilized floodplains with slopes of 2 to 30 percent at elevations of 400 to 2000 feet. These slightly acidic to moderately alkaline soils have slow permeability and are used and are used for irrigated crops and dryland grain, dairy and cattle production, and building site development.
Exeter loam, 0 to 2 percent slopes	Soils in the Exeter series are moderately deep to a duripan, well-drained, and formed in alluvium from mainly granitic sources. This soil series is found on alluvial fans and stream terraces floodplains with slopes of 0 to 9 percent at elevations of 20 to 700 feet. These soils range from slightly acidic to moderately alkaline and have slow permeability and are irrigated to grow a variety of crops and produce. Exeter soils are also used for dairy and cattle production and building site development.
Exeter loam, 2 to 5 percent slopes	
Exeter loam, 2 to 9 percent slopes	
Flamen loam, 0 to 2 percent slopes	Soils in the Flamen series are moderately deep to a duripan, moderately well-drained, and formed in alluvium from mainly granitic sources. Flamen soils are well-drained and formed in alluvium from mostly sedimentary rock. This soil series is found on stream terraces and have slopes of 0 to 2 percent at elevations of 260 to 550 feet. These slightly acidic to moderately alkaline soils have moderate permeability above the duripan and are used for irrigated crops and orchards, dairy and cattle production, and building site development.
Greenfield sandy loam, 0 to 2 percent slopes	Greenfield soils are deep, well-drained and formed in coarse alluvium from granitic and mixed rocks. This soil series is found on alluvial fans and terraces with slopes

[18] Ibid.

[19] *Rexford Solar Farm Project Biological Resources Assessment*". Pages 10 through 13. Prepared by Rincon and included in Appendix "D" of this DEIR.

Table 3.7-2. Area of Interest Soils[19]

Soils	Soil Series
Greenfield sandy loam, 2 to 5 percent slopes	of 0 to 30 percent at elevations of 300 to 850 feet. These mildly alkaline soils have moderately rapid permeability and are used for a variety of field, forage, and fruit crops, along with dryland grain and pasture.
Porterville clay, 0 to 2 percent slopes	Porterville soils are deep, well-drained and formed in fine alluvium from basic and metabasic igneous rock. This soil series is found on fans foothills with slopes of 0 to 15 percent. At elevations ranging from below 2000 feet and over 4500 feet, these neutral to moderately alkaline soils have slow permeability and are used mainly for range pasture, although irrigated orchards are sometimes planted.
Porterville clay, 2 to 9 percent slopes	
San Joaquin loam, 0 to 2 percent slopes	Soils in the San Joaquin series are moderately deep to a duripan, moderately well to well-drained, and formed in alluvium from mixed but dominantly granitic sources. This soil series is found on undulating low terraces with slopes of 0 to 9 percent at elevations of 20 to 500 feet. These moderately acidic to moderately alkaline soils have very slow permeability and are used mainly for grazing, growing of small grains and rice, as well as fruits, nuts, and vineyards.
Yettem sandy loam, 0 to 2 percent slopes	Yettem soils are very deep, well-drained, and formed in alluvium from granitic sources. This soil series is found on alluvial fans and floodplains with slopes of 0 to 5 percent at elevations of 225 to 1500 feet. These slightly acidic soils have moderately rapid permeability and are used for annual pasture and crops such as oranges, plums, olives, walnuts, and grapes. A typical soil profile includes several layers of sandy loam of various types, loamy sand, or gravelly equivalents of each.
Riverwash	Riverwash consists of recent deposits of gravel, sand, and silt alluvium along streams and tributaries During floods, these alluvial materials can shift readily, responding to processes of erosion and deposition.

Landslides

The Project site is relatively flat, with a topographic gradient less than 2 percent. Due to the existing topography and the proposed grading, landslides are not considered a potential hazard for the Project.

Paleontological Resources

According to the geologic map contained in the "*CEQA Level Geotechnical Study*" (Appendix "F" of this DEIR), the Project site is underlain by terrestrial Plio-Pleistocene deposits typically referred to as the Kern River Formation. Several known vertebrate fossil localities from the Kern River Formation are all located south-southeast of the current Project area and northeast of Bakersfield.[20]

3.7.5 Regulatory Setting

State

Seismic Hazards Mapping Act

"Under the Seismic Hazards Mapping Act, the State Geologist is responsible for identifying and mapping seismic hazards zones as part of the California Geologic Survey (CGS). The CGS provides zoning maps of non-surface rupture earthquake hazards (including liquefaction and seismically induced landslides) to local governments for planning purposes. These maps are intended to protect the public from the risks associated with strong ground shaking, liquefaction, landslides or other

[20] AMEC Environment and Infrastructure, Inc. 2012. "Cultural Resources Survey Report for the Proposed 1,064-Acre Tulare Solar Center." Page 14.

ground failure, and other hazards caused by earthquakes. For projects within seismic hazard zones, the Seismic Hazards Mapping Act requires developers to conduct geological investigations and incorporate appropriate mitigation measures into project designs before building permits are issued."[21]

California Building Code

"The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards."[22]

Alquist-Priolo Earthquake Fault Zoning Act

"The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces."[23]

CEQA Guidelines: Paleontological Resources

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."

Local

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

ERM-7.2 Soil Productivity. The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other similar agencies and organizations.

HS-2.1 Continued Evaluation of Earthquake Risks. The County shall continue to evaluate areas to determine levels of earthquake risk.

HS-2.4 Structure Siting. The County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.

HS-2.7 Subsidence. The County shall confirm that development is not located in any known areas of active subsidence. If urban development may be located in such an area, a special safety study will be prepared and needed safety measures implemented. The County shall also request that developments provide evidence that its long-term use of ground water resources, where applicable,

[21] Tulare County General Plan 2030 Update, Background Report. Page 8-10.

[22] Ibid. Page 8-3.

[23] Ibid.

will not result in notable subsidence attributed to the new extraction of groundwater resources for use by the development.

HS-2.8 Alquist-Priolo Act Compliance. The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones (pursuant to and as determined by the Alquist-Priolo Earthquake Fault Zoning Act; Public Resource code, Chapter 7.5) unless the specific provision of the Act and Title 14 of the California Code of Regulations have been satisfied.

3.7.6 Impact Evaluation

Would the Project:

a) Directly or indirectly cause potential substantial adverse effects, including 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.

Project Impact Analysis: ***Less Than Significant Impact***

No substantial faults are known to traverse Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation.[24] The nearest active fault is the White Wolf Fault, located approximately 45.8 miles southeast of the Project site. Surface rupture occurs when the ground surface is broken due to a fault movement during earthquakes. Generally, these types of hazards occur in the vicinity of an active fault. However, no active faults are known to underlie or Project toward the Project site. The proposed Project will not expose people or structures to potential substantial adverse effects relating to rupture of a known earthquake fault. Therefore, any impacts resulting from the rupture of a known earthquake fault will be ***Less Than Significant.***

ii. Strong seismic ground shaking?

Project Impact Analysis: ***Less Than Significant Impact***

The Project site is located on the Valley floor. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. Studies conducted by the USGS show that the Project vicinity has a .01 to 1 percent probability of experiencing an earthquake with a magnitude of 6.7 or higher within the next 30 years.[25] In such an event, the Project vicinity could experience shaking effects depending on the location of the earthquake epicenter, magnitude, and behavior of materials that underlie to Project site. However, due to the low probability of a high magnitude earthquake, the risk of groundshaking at the Project site is not high. Additionally, Tulare County is characterized as Severity zone "Nil" and "Low" for groundshaking events.[26] The Project does not include the construction of any residences; and

[24] State of California Department of Conservation, Alquist-Priolo Earthquake Fault Zone Maps, http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm. Accessed March 2020.

[25] USGS. UCERF3: A New Earthquake Forecast for California's Complex Fault System. March 2015. https://pubs.usgs.gov/fs/2015/3009/pdf/fs2015-3009.pdf

[26] Tulare County General Plan 2030 Update, *Part 1-Goals and Policies Report*. Page 253.

construction- and decommissioning-related phases will be temporary. Furthermore, the Project, including O&M facilities, will be required to adhere to the California Building Code (CBC), which includes design specifications and criteria to minimize damage from seismic events. Together, these factors will result in a minimal risk of damage to people or structures if seismic ground shaking occurred. Therefore, seismic groundshaking on people and structures on the Project site will result in a ***Less Than Significant Impact***.

iii. Seismic-related ground failure, including liquefaction?

Project Impact Analysis: ***Less Than Significant Impact***

Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content.

According to the geotechnical study prepared for the Project, the Project site is not located within a current, mapped California Liquefaction Hazard Zone. Furthermore, groundwater in the Project area is expected to be approximately 480 feet below the ground surface. Based on the near surface soil conditions and depth to groundwater, the potential for inception of liquefaction and liquefaction-related ground failure is low.[27] Therefore, impacts related to seismic-related ground failure, including liquefaction, will be ***Less Than Significant.***

iv. Landslides

Project Impact Analysis: ***No Impact***

The Project site is relatively flat, with a topographic gradient less than 2 percent. Due to the existing topography and the proposed grading, landslides are not considered a potential hazard for the Project. Therefore, the proposed Project will result in ***No Impact*** on people and structures with regard to the risk of landslides.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not result in significant impacts related to fault rupture, groundshaking, liquefaction, and landslides. Furthermore, the proposed Project will be required to adhere to the CBC, which includes design specifications and criteria to minimize damage from seismic events. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

[27] "*CEQA Level Geotechnical Study"*, Section 3.4.3 Liquefaction. Page 17.

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

Project Impact Analysis: ***Less Than Significant Impact***

The construction- and decommissioning-related activities of the Project will involve ground-disturbing earthwork including limited earthmoving, trenching, and grading. These activities could increase the susceptibility of soils on the Project site to erosion by wind or water and subsequently result in the loss of topsoil. If not controlled and managed, the impact of soil erosion could be significant. However, a Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented as part of the Project in accordance with a NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities. This plan will include Best Management Practices (BMPs) designed to control and reduce soil erosion. The BMPs may include dewatering procedures, storm water runoff quality control measures, watering for dust control, and the construction of silt fences, as needed. Compliance with local grading and erosion control ordinances will also help minimize adverse effects associated with erosion and sedimentation. Any stockpiled soils will be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction and decommissioning. During construction-related activities, soil compaction will be used to further reduce soil erosion. Once the Project has been decommissioned, the site will be re-seeded and re-vegetated with low-growing appropriate species. The implementation of these soil and erosion control measures will ensure that soil disturbance and loss will result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will be required to prepare and implement a SWPPP and comply with local grading and erosion control ordinances to minimize potential erosion and sedimentation impacts. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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?

Project Impact Analysis: ***Less Than Significant Impact***

“Groundwater levels near the site in the San Joaquin Valley where the Project site is located have declined more than 450 feet since the 1960s. These groundwater-level declines have caused the aquifer system to compact, resulting in land subsidence. Land subsidence within the San Joaquin Valley has been most recently evaluated by the USGS through the use of Interferometric Synthetic Aperture Radar between 2011 and 2015. Based on these recent studies, parts of the Project site west of the town of Ducor are within an area that has sustained up to seven inches of subsidence between 2011 and 2015 due to groundwater draw down (USGS 2020). Due to the depth of

groundwater and the fact that the Project site is located in a mapped subsidence area, the potential for subsidence is considered moderate to high."[28] As discussed above, the Project site is not located in an area with significant risk of rupture of an earthquake fault, seismic groundshaking, liquefaction, landslides, or other soil stability hazards. As Project construction-related activities will be required to adhere to the CBC, which includes requirements for site preparations such as compaction requirements for foundations, impacts associated with ground instability will be minimized. Therefore, the Project will have a ***Less Than Significant Impact*** related to unstable geologic units or soils.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not result in significant impacts related to unstable geologic units or soils because it will be required to adhere to the CBC, which includes requirements for site preparations such as compaction requirements for foundations. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Code (1994), creating substantial direct or indirect risks to life or property?

Project Impact Analysis: ***Less than Significant Impact***

Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). The near-surface soils encountered during the recent geotechnical investigation for the Project are mostly sandy soils whose expansion potential is considered low. Soil conditions are not prone to soil instability due to their low shrink swell behavior. The Project will be required to adhere to the CBC design standards and regulations. Therefore, the proposed Project will not directly or indirectly expose lives or structures to a significant risk due to expansive soils. As a result, the Project will result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the soils encountered on the Project site have a low expansion potential. The Project will be required to adhere to the CBC design standards and regulations. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

[28] Ibid.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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

Project Impact Analysis: ***Less Than Significant Impact***

The Project applicant is proposing the use of a standard on-site septic tank and leach field for the treatment and disposal of on-site generated sanitary wastewater. This will occur only at the O&M building. The design for the on-site septic will be submitted to the Tulare County Environmental Health Department for approval prior to issuance of building permits. Furthermore, the septic system design will be subject to a percolation test prior to construction. Compliance with Tulare County laws, ordinances, regulations, and standards will ensure that the proposed Project will not result in significant impacts associated with the use of septic tanks. Therefore, the impact will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, compliance with Tulare County laws, ordinances, regulations, and standards will ensure that the proposed Project will not result in significant impacts associated with the use of septic tanks. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Impact Analysis: ***Less Than Significant Impact with Mitigation***

There are no known paleontological resources on the Project site or its immediate vicinity. According to the geologic map contained in the "*CEQA Level Geotechnical Study*" (Appendix "F" of this DEIR), the Project site is underlain by terrestrial Plio-Pleistocene deposits typically referred to as the Kern River Formation. Several known vertebrate fossil localities from the Kern River Formation are all located south-southeast of the current Project area and northeast of Bakersfield. Portions of the proposed Project area (particularly in the central portion) appear to have surface deposits of younger Quaternary Alluvium primarily associated with the White River. These deposits typically do not contain significant vertebrate fossils (at least in the upper most layers); however, according to a paleontological resource record search conducted for the Tulare Solar Center Project, located immediately adjacent to the proposed Project site, two vertebrate fossils localities from the Quaternary Alluvial deposits have been identified east of the northern part of the Tulare

Solar Center Project area between Fountain Springs and White River.[29] Both of those localities produced specimens of fossil mammoth, *Mammuthus*. It is unknown whether subsurface resources exist. Similar to the Tulare Solar Center Project, there is a possibility that that subsurface resources could be uncovered during construction-related activities in the proposed Project area. In such an event, potentially significant impacts to previously unknown subsurface paleontological resources may occur. With the implementation of **Mitigation Measure 3.5-1** (see Section 3.5, Cultural Resources, of this DEIR), the Project-specific impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less Than Significant Impact with Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-1**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will be considered ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s): ***Mitigation Measure 3.5-1*** **(see Section 3.5, Cultural Resources, of this DEIR)**

Conclusion: ***Less Than Significant Impact with Mitigation***

With implementation of ***Mitigation Measure 3.5-1***, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

[29] AMEC Environment and Infrastructure, Inc. 2012. "Cultural Resources Survey Report for the Proposed 1,064-Acre Tulare Solar Center." Page 14.

3.8 Greenhouse Gas Emissions

3.8.1 Summary of Findings

The proposed Project will result in a ***Less Than Significant Impact*** related to Greenhouse Gas (GHG) Emissions. The impact analyses and determinations in this section are based upon information obtained from the "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" prepared by Rincon Consultants, Inc., provided in Appendix "C" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.8.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts related to GHG emissions. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

CEQA Guideline Section 15064.4, Determining the Significance of Impacts from Greenhouse Gas Emissions, provides the following guidance for lead agencies in determining the significance of impacts from GHG emissions:

"(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Quantify greenhouse gas emissions resulting from a project; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of

greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the projects incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the projects incremental contribution to climate change and its conclusion that the projects incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use."[1]

The Environmental Setting provides a description greenhouse gases and the County's existing (2007) and projected (2030) greenhouse gas emissions inventory. The Regulatory Setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update (General Plan), Tulare County General Plan 2030 Update Background Report (Background Report), and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. A significant impact would occur if the project 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 adopted for the purpose of reducing the emissions of greenhouse gases."[2]

[1] CEQA Guidelines, Section 15064.4

[2] Ibid. Appendix G: Environmental Checklist Form.

The San Joaquin Valley Unified Air Pollution Control District (SJVAPCD or Air District) provides the following guidance to lead agencies for determining the cumulative significance of project specific GHG emissions on global climate change:

- "Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement [Best Performance Standards] BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to [Business-as-Usual] BAU, including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG."[3]

3.8.3 Environmental Setting

"Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons

[3] San Joaquin Valley Unified Air Pollution Control District. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA. Pages 4 to 5. https://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf. Accessed February 2020.

(PFCs), and sulfur hexafluoride (SF_6)."[4] Nitrogen trifluoride was not listed initially in AB 32 but was subsequently added to the list via legislation.[5]

"Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature (GMST) for the decade from 2006 to 2015 was approximately 0.87°C (0.75°C to 0.99°C) higher than the average GMST over the period from 1850 to 1900. Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014 and 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snow pack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018)."[6]

3.8.4 Existing Conditions

"In 2007, Tulare County generated approximately 5.2 million tonnes of CO_2e [carbon dioxide equivalents]. The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources."[7] **Table 3.8-1** identifies Tulare County's emissions by sector in 2007.

Table 3.8-1. Emissions by Section in 2007[8]

Section	CO_2e	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	**5,208,060**	**100%**

[4] General Plan Background Report. Pages 6-19 to 6-20.

[5] California Air Resources Board. Assembly Bill 32 Overview. http://www.arb.ca.gov/cc/ab32/ab32.htm. Accessed February 2020.

[6] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Page 40. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

[7] General Plan 2030 Update Background Report. Page 6-36.

[8] Ibid. 6-38.

Table 3.8-1. Emissions by Section in 2007[8]

Section	CO_2e	% of Total
Per Capita	**36.1**	

"In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO_2e. The largest portion of these emissions (59 percent) is attributed to dairies/feedlots, while the second largest portion (20 percent) is from mobile sources…Per capita emissions in 2030 are projected to be approximately 27 tonnes of CO_2e per resident."[9] **Table 3.8-2** shows Tulare County's projected emissions by section in 2030.

Table 3.8-2. Projected Emissions by Section in 2030[10]

Section	CO_2e	% of Total
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	**6,105,480**	**100%**
Per Capita	**27.4**	

3.8.5 Regulatory Setting

Federal

United States Environmental Protection Agency (US EPA)

"On December 7, 2009, the Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases – carbon dioxide (CO_2), methane (CH_4), nitrous dioxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) – in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare."[11]

[9] Op. Cit.

[10] Op. Cit.

[11] United States Environmental Protection Agency. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean. Accessed February 2020.

State

California Clean Air Act

"The California [Clean Air Act] CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California's standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans."[12]

Executive Order S-3-05

"In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger issued Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the Executive Order, the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state (Climate Action Team, 2006)."[13]

Assembly Bill 32: California Global Warming Solutions Act of 2006

"In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

The bill also requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The bill authorizes CARB to adopt market-based compliance mechanisms. The bill additionally requires the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions

[12] Tulare County 2030 General Plan DEIR. Pages 3.3-2 to 3.3-3.
[13] Tulare County General Plan 2030 Update Background Report. Pages 6-21 to 6-22.

reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill also authorizes CARB to adopt a schedule of fees to be paid by regulated sources of GHG emissions. Because the bill requires CARB to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

Under AB 32, by June 30, 2007, CARB was to identify a list of discrete early action GHG reductions that will be legally enforceable by 2010. By January 1, 2008, CARB was also to adopt regulations that will identify and require selected sectors to report their statewide GHG emissions. By January 1, 2011, CARB must adopt rules and regulations to achieve the maximum technologically feasible and cost-effective reductions in GHG reductions. CARB is authorized to enforce compliance with the program that it develops."[14]

Senate Bill 97

"Governor Schwarzenegger signed Senate Bill (SB) 97 (Sutton), a CEQA and GHG emission bill, into law on August 24, 2007. SB 97 requires the Governor's Office of Planning and Research (OPR) to prepare CEQA guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. OPR must prepare these guidelines and transmit them to the Resources Agency by July 1, 2009. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The Resources Agency must then certify and adopt the guidelines by January 1, 2010. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.

The OPR published a Technical Advisory in June of 2008 that is an "informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents" to serve in the interim until guidelines are established pursuant to SB 97 (OPR, 2008). This Advisory recommends that CEQA documents include quantification of estimated GHG emissions associated with a proposed project and that a determination of significance be made. With regard to significance the Advisory states that "lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a "significant impact", individual lead agencies may undertake a project-by-project analysis, consistent with the available guidance and current CEQA practice."[15]

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB

[14] Ibid. Pages 6-22 to 6-23.

[15] Op. Cit. (at Technical Advisory – CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review). Pages 6-26 to 6-27.

is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG emission reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.[16]

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the Renewables Portfolio Standard (RPS) goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045.[17]

California Air Resources Board

"The Air Resources Board (ARB or Board) has established State ambient air quality standards (State standards) to identify outdoor pollutant levels considered safe for the public. After State standards are established, State law requires ARB to designate each area as attainment, nonattainment, or unclassified for each State standard. The area designations, which are based on the most recent available data, indicate the healthfulness of air quality throughout the State."[18] On July 22, 2004, the California Air Resources Board adopted the 2004 Revisions to the California State Implementation Plan for Carbon Monoxide.[19]

Climate Change Scoping Plan

"The CARB published a Climate Change Scoping Plan in December 2008 (CARB, 2008c) that outlines reduction measures to lower the state's GHG emissions to meet the 2020 limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health". Key elements for reducing California's GHG emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;

[16] Senate Bill 375 (Steinberg). http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375. Accessed February 2020.

[17] Senate Bill 100. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB100. Accessed February 2020.

[18] California Air Resources Board. Air Quality Standards and Area Designations. http://www.arb.ca.gov/desig/desig.htm. Accessed February 2020.

[19] California Air Resources Board. 2004 Revisions to the California State Implementation Plan for Carbon Monoxide. http://www.arb.ca.gov/planning/sip/co/co.htm. Accessed February 2020.

- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation."[20]

Regional

California Air Pollution Control Officers Association (CAPCOA)

"In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating GHG emissions under CEQA (CAPCOA, 2008). The CAPCOA white paper strategies are not guidelines and have not been adopted by any regulatory agency; rather, the paper is offered as a resource to assist lead agencies in considering climate change in environmental documents."[21]

The California Association of Air Pollution Control Officers (CAPCOA) represents all thirty-five local air quality agencies throughout California. CAPCOA, which has been in existence since 1975, is dedicated to protecting the public health and providing clean air for all our residents and visitors to breathe, and initiated the Greenhouse Gas Reduction Exchange.[22]

"The Greenhouse Gas Reduction Exchange (GHG Rx) is a registry and information exchange for greenhouse gas emissions reduction credits designed specifically to benefit the state of California. The GHG Rx is a trusted source of locally generated credits from projects within California, and facilitates communication between those who create the credits, potential buyers, and funding organizations."[23] Four public workshops were held throughout the state including in the SJVAPCD. The mission is to provide a trusted source of high quality California-based greenhouse gas credits to keep investments, jobs, and benefits in-state, through an Exchange with integrity, transparency, low transaction costs and exceptional customer service.[24]

San Joaquin Valley Unified Air Pollution Control District (SJVAPCD or Air District)

"The San Joaquin Valley Air District (SVJAPCD) is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies."[25] "The San Joaquin Valley Air Pollution Control District is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern."[26]

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[20] Tulare County General Plan 2030 Update Background Report. Pages 6-27 to 6-28.

[21] Op. Cit. Page 6-28.

[22] California Air Pollution Control Officers Association. http://www.capcoa.org/. Accessed February 2020.

[23] California Air Pollution Control Officers Association. CAPCOA Greenhouse Gas Reduction Exchange. http://www.capcoa.org/ghg-rx/. Accessed February 2020.

[24] California Air Pollution Control Officers Association. CAPCOA Greenhouse Gas Reduction Exchange. http://www.ghgrx.org/. Accessed February 2020.

[25] San Joaquin Valley Unified Air Pollution Control District. About the District. http://www.valleyair.org/General_info/aboutdist.htm#Mission. Accessed February 2020.

[26] Ibid.

On December 17, 2009, the District's Governing Board adopted the District Policy: *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's Governing Board also approved the guidance document: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA*. In support of the policy and guidance document, District staff prepared a staff report: *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*.[27]

The SJVAPCD determined that the quantification of GHG Emissions is expected for all projects that require an Environmental Impact Report.[28]

This Draft EIR is relying on the guidance and expertise of the Air District in addressing GHG emissions. The following is an excerpt contained in the San Joaquin Valley Air Pollution Control District's Guidance for Assessing and Mitigating Air Quality Impacts.

"By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze greenhouse gas emissions as a part of the CEQA process. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of greenhouse gas emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead Agencies must analyze the greenhouse gas emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. [See CCR §15064.4];
- When a project's greenhouse gas emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. [See CCR §15126.4(c)];
- Lead Agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. [See CCR §15126.2(a)];
- Lead Agencies may significantly streamline the analysis of greenhouse gases on a project level by using a programmatic greenhouse gas emissions reduction plan meeting certain criteria. [See CCR §15183.5(b)];
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.)

It is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change. GHG emissions, and their associated contribution to climate change, are inherently a cumulative impact issue. Therefore, project-level impacts of GHG emissions are treated as one-in-the-same as cumulative impacts.

In summary, the staff report evaluates different approaches for assessing significance of GHG emission impacts. As presented in the report, District staff reviewed the relevant scientific information

[27] These documents and the supporting staff reports are available at the District's website: http://www.valleyair.org/Programs/CCAP/CCAP_idx.htm. Accessed February 2020.

[28] San Joaquin Valley Unified Air Pollution Control District. District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency. Page 6.

and concluded that the existing science is inadequate to support quantification of the extent to which project specific GHG emissions will impact global climate features such as average air temperature, average rainfall, or average annual snow pack. In other words, the District was not able to determine a specific quantitative level of GHG emissions increase, above which a project will have a significant impact on the environment, and below which will have an insignificant impact. This is readily understood, when one considers that global climate change is the result of the sum total of GHG emissions, both manmade and natural that occurred in the past; that is occurring now; and will occur in the future.

In the absence of scientific evidence supporting establishment of a numerical threshold, the District policy applies performance based standards to assess project specific GHG emission impacts on global climate change. The determination is founded on the principal that projects whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006, commonly referred to as "AB 32", should be considered to have a less than significant impact on global climate change. For a detailed discussion of the District's establishment of thresholds of significance for GHG emissions, and the District's application of said thresholds, the reader is referred to the above referenced staff report, District policy, and District Guidance documents."[29]

The Air District's policy "provides for a tiered approach in assessing significance of project-specific GHG emission increases.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).
- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

The District guidance for development projects also relies on the use of BPS. For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Projects implementing any combination of BPS, and/or demonstrating a total 29

[29] San Joaquin Valley Unified Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts. Pages 110 to 112.

percent reduction in GHG emissions from BAU would be determined to have a less than cumulatively significant impact on global climate change."[30]

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County that support reduction efforts of GHG. General Plan policies that relate to the proposed Project are listed as follows:

AQ-1.3 Cumulative Air Quality Impacts. The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance. The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions. The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan. The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions. The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

Tulare County Climate Action Plan

"The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific

[30] Ibid. Pages 110 to 112.

actions that will be applied to achieve emission reduction targets consistent with California legislation."[31]

3.8.6 Impact Evaluation

Would the Project:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Project Impact Analysis: ***Less than Significant***

The Project will generate GHG emissions directly and indirectly during construction, routine operational and maintenance activities, and decommissioning activities. The majority of emissions from the Project will be generated during construction and decommissioning activities. The analysis relied on CARB's on-road vehicle emission factor model (EMFAC2017), CARB's 2017 Off-Road Equipment Inventory Model (OFFROAD2017), and emission factors obtained from the USEPA AP-42 Compilation of Air Pollutant Emissions Factors (as amended). Modeling outputs of Project emissions can be found in the "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" (Appendix "C" of this DEIR).

Construction and Decommissioning. Construction of the Project will generate temporary GHG emissions primarily from the use of on-site construction equipment, vehicles transporting construction workers to and from the Project site, and heavy-duty trucks used to export earth materials off-site.

Table 3.8-3 presents total estimated emissions from construction activities from on-site and off-site emission sources. The estimated total GHG emissions during Project construction will be approximately 4,855 MT CO_2e over the 27-month construction period. It was conservatively assumed that decommissioning of the Project will use the same type and amount of equipment in a similar schedule to construction, therefore decommissioning of the Project was estimated to generate an equivalent amount of emissions as construction. This is a conservative estimate because on-road vehicles and off-site equipment will continue to improve in fuel efficiency resulting in reduced emissions over time, as such decommissioning emissions in 30 years will likely be substantially lower than construction emissions. Estimated construction and decommissioning emissions related to the Project amortized over 30 years, the anticipated Project lifetime, will be approximately 324 MT CO_2e per year.

Table 3.8-3. Estimated Greenhouse Gas Emissions During Construction[32]

	Emissions Source (MT CO_2e)				
Year	Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	Total (MT CO_2e)
2021	363	<0.1	36	8	408
2022	2,064	0.2	375	34	2,473

[31] Tulare County Climate Action Plan. Page 1.

[32] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Page 49. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

Table 3.8-3. Estimated Greenhouse Gas Emissions During Construction[32]

Year	Emissions Source (MT CO_2e)				Total (MT CO_2e)
	Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	
2023	1,602	0.2	337	34	1,973
Total Construction	**4,030**	**0.5**	**749**	**76**	**4,855**
Total Decommissioning	**4,030**	**0.5**	**749**	**76**	**4,855**
Construction and Decommissioning	**8,059**	**1.0**	**1,498**	**152**	**9,709**
Amortized Emissions (30-year life)s	**269**	**<0.1**	**50**	**5**	**324**

Operations. Operational activities of the Project will generate GHG emissions primarily from operation of maintenance equipment on-site and vehicles transporting employees to and from the Project site.

Table 3.8-4 summarizes operational emissions associated with the Project. Operation and maintenance of the Project will generate GHG emissions largely through motor vehicle trips to and from the Project site; on-site maintenance activities involving portable equipment and maintenance vehicles; and energy use associated with water consumption. As shown in **Table 3.8-4**, the Project will emit an estimated 16 MT CO_2e per year during operation. The total construction and decommissioning GHG emissions, amortized over 30 years, was added to the annual estimated operational emissions to estimate annual GHG emissions generated by the Project. As shown in **Table 3.8-4**, the Project will emit an average of 340 MT CO_2e per year over the operational life of the Project (assumed 30 years).

Displaced GHG Emissions. Construction and operation of renewable energy facilities will offset GHG emissions by replacing energy generated by fossil-fueled power plants. The Project will generate approximately 1,566 gigawatt-hours (GWh) of solar-generated electricity each year that will be added to the power grid and be used in place of electricity generated by fossil-fuel sources. Based on the Project's projected annual electricity generation and the GHG emissions generated due to fossil-fuel combustion to generate the same level of electricity, the Project has the potential to displace 337,071 MT CO_2e per year. Therefore, the net generation of annual GHG emissions will be -336,731 MT CO_2e, as shown in **Table 3.8-4**. As such, the Project will result in an overall lifetime reduction estimated at 10,101,915 (i.e., 336,731 * 30 yrs = 10,101,915) MT CO_2e and will therefore be regionally beneficial. Implementation of the proposed Project will result in a ***Less than Significant Impact*** associated with the generation of GHG emissions.

Table 3.8-4. Estimated Annual Operational Greenhouse Gas Emissions[33]

	Emissions Source (MT CO_2e)				Total (MT CO_2e)
	Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	
Operation	<0.1	<0.1	6	9	16
Amortized Construction and Decommissioning Emissions	269	<0.1	50	5	324
Annual Total	**269**	**<0.1**	**56**	**15**	**340**
Annual Displaced GHG Emissions (MT/year)					**337,071**
Net Annual GHG Emissions (MT/year)					**-336,731**

Cumulative Impact Analysis: ***Less than Significant***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. The Project-related emissions will be considered to have a significant cumulative impact if Project-specific impacts are determined to be significant. As previously discussed above, the proposed Project will generate GHG emissions during construction, routine operational and maintenance activities, and decommissioning activities. However, the proposed solar generating facility will offset GHG emissions by replacing energy generated by fossil-fueled power plants. The Project will result in an overall lifetime reduction estimated at 10,101,915 MT CO_2e and will therefore be regionally beneficial. As the proposed Project will result in a Less than Significant Project-specific impact, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant.***

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Project Impact Analysis: ***No Impact***

In April 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target will make it possible for California to reach its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05. Executive Order B-30-15 also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the State's Five-Year Infrastructure Plan;

[33] "*Rexford Solar Farm Project Air Quality and Greenhouse Gas Study*" Page 50. Prepared by Rincon Consultants, Inc. and included in Appendix "C" of this EIR.

- Update the Safeguarding California Plan, the State climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the Renewables Portfolio Standard (RPS) goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. Subsequently, SB 32, which codifies the Executive Order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 statewide GHG emissions limit no later than December 31, 2030 (the target date established by Executive Order B-30-15. CARB recently adopted the 2017 Scoping Plan) to achieve this goal.

The Tulare County CAP serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP requires projects on average achieve a reduction that is six percent in excess of the reductions stated in the ARB Scoping Plan and by regional regulations and programs. AB 32 requires CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

The Project involves the construction-, operation- and maintenance-, and decommissioning-related activities of a solar facility that will produce a new renewable source of energy in Tulare County. The Project will generate approximately 1,566 GWh of electricity each year or approximately 46,986 GWh over the Project's 30-year lifetime. This additional solar-generated energy will be added to the power grid and used in place of electricity generated by fossil-fuel sources and, thus will directly support energy goals under SB 32, SB 100, and AB 32. Additionally, the Project will be consistent with the County's CAP goal to encourage renewable energy, including solar facilities. The Project will be consistent with state and regional plans to reduce GHG emissions and ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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3.9 Hazards and Hazardous Materials

3.9.1 Summary of Findings

The proposed Project will result in ***Less Than Significant Impacts*** related to Hazards and Hazardous Materials. The *"Phase I Environmental Site Assessment (ESA)"* was prepared by Technicon Engineering Services, Inc. (Technicon) and is included in Appendix "G" of this Draft EIR (or DEIR). The impact analysis and determinations in this chapter are based on information obtained from the Phase I ESA prepared for the Project. A detailed review of potential impacts is provided in the following analysis.

3.9.2 Introduction

CEQA Requirements

This section of the DEIR addresses potential impacts to Hazards and Hazardous Materials. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Hazards and Hazardous Materials in the County. The Regulatory Setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes

[1] CEQA Guidelines, Section 15126.2(a).

the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA checklist items. The following are potential thresholds for significance:

- Create a significant hazard
- Located within one-quarter mile of an existing or proposed school
- Located on a list of hazardous materials sites
- Located within an airport land use plan
- Located within the vicinity of a private airstrip
- Interfere with adopted emergency response plan or emergency evacuation plan
- Wildland fire risk

3.9.3 Environmental Setting

"A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10)."[2]

"Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3)."[3]

Hazardous Waste Shipments Originating Within Tulare County

"In 2007, the DTSC Hazardous Waste Tracking System (HWTS) manifest data reports that approximately 5,925 tons of hazardous waste was transported from all categories of generators in Tulare County. As of November 2008, hazardous waste data available for 2008 indicated that approximately 7,160 tons of hazardous waste was generated in the county (DTSC, 2008a)".[4] The quantities of hazardous waste transported from facilities located within each zip code in Tulare County are shown in **Table 3.9-1**.

[2] Tulare County General Plan 2030 Update Background Report. Page 8-26. http://generalplan.co.tulare.ca.us/documents.html.

[3] Ibid. Pages 8-26.

[4] Op. Cit. Page 8-37.

Table 3.9-1. Transport of Hazardous Waste[5]

Zip Code	Total Tons	Zip Code	Total Tons	Zip Code	Total Tons	Zip Code	Total Tons
93219	0.579	93221	19.100	93223	14.730	93227	6.792
93244	4.270	93247	36.370	93256	14.390	93257	155.000
93262	0.459	93271	4.463	93272	17.780	93274	146.700
93275	14.780	93277	407.800	93279	52.010	93286	7.152
93291	321.700	93292	25.600	93615	2.606	93618	139.100
93631	321.700	93647	65.630	93654	4.255	93673	4.915

Environmental Health Department Futures Assessment

"The Environmental Health Department [EHD], of which the [Certified Unified Program Agency] CUPA is a part, anticipates a slight increase in the reported volume of hazardous waste generated within Tulare County in year 2003/04. However, EHD does not expect an increase in the actual volume of hazardous waste generated over the same period."[6]

3.9.4 Existing Conditions

Phase I ESA

A Phase I ESA was conducted on the Project site to review, evaluate, and document present and past land uses and practices, and visually examine site conditions in order to identify recognized environmental conditions (RECs). The Phase I ESA consisted of, but not limited to, a visual inspection of the Project site and surrounding properties, a review of available regulatory agency records and permits, aerial photographs, and interviews with persons knowledgeable of the Project site.

Environmental Data Search

A review of reasonably ascertainable environmental regulatory agency databases was conducted to identify known or suspected environmental concerns or RECs that may be associated with the Project site. A search of readily available environmental records was obtained from Environmental Data Resources, Inc. (EDR) of Milford, Connecticut. The purpose of the regulatory database report review was to evaluate to the extent possible whether prior activities, processes, operations or actions on the Project site, adjoining properties, and nearby locations have the potential to adversely impact the environmental integrity of the Project site, are suspected sources of environmental contamination, or present RECs for the Project site. The regulatory database report includes information from federal, state, local, military, and tribal environmental regulatory agency databases.

Based on the environmental data search, no evidence of RECs or records of environmental liens have been found in connection with the Project site.[7]

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[5] Tulare County General Plan 2030 Update Draft 2008 Background Report. Page 8-31.

[6] Ibid. Page 8-32.

[7] "*Phase I ESA"*. Page 23. Prepared by Technicon and included in Appendix "G" of this EIR.

Site Reconnaissance

A site reconnaissance was conducted in an effort to determine if the current uses of the site were likely to involve the use, treatment, storage, disposal or generation of hazardous substances or petroleum products. Although not considered RECs, the Phase I ESA notes the following observations:

- Three irrigation wells were observed at three Project parcels located north of Avenue 56 (APNs 321-140-015, 321-120-002, and 321-070-014 [see Figure 2 in Appendix "G" of this DEIR]). One of the irrigation wells appears to be non-operational.
- Two plugged/abandoned oil gas wells identified on the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website are located on APN 321-140-013 (see Figure 2 in Appendix "G" of this DEIR).
- The residences and associated buildings on the site were constructed before the 1978 ban on the manufacture of friable asbestos containing materials. Therefore, asbestos-containing construction materials may be present in the building materials used for their construction.

Schools

The nearest school to the proposed Project site is Ducor Union Elementary School, located at 23761 Avenue 56 in Ducor, approximately 0.30 miles west of the nearest Project boundary (from APN 321-190-001).

Airports

The Project site is not located within an area covered by an airport land use plan or within two miles of a public airport or public use airport. The Porterville Municipal Airport is located approximately 7.6 miles north of the Project site. The San Joaquin Sprayers Incorporated Heliport is located approximately 6.12 miles southwest of the Project site.

Fire Hazard Severity Zones

According to the Fire Hazard Severity Zones map published by the California Department of Forestry and Fire Protection (Cal Fire)[8] and shown in **Figure 3.20-1** (see Section 3.20, Wildfire, of this DEIR), a majority of the Project site located east of State Route 65 is within a State Responsibility Area classified as having moderate potential for wildfires. The remainder of the Project site has not been zoned for fire severity by Cal Fire.

3.9.5 Regulatory Setting

Federal

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (HMTA) as amended, is the major transportation-related statute affecting DOE. The objective of the HMTA according to the policy stated by Congress is "…to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against risks to life and property which are inherent in

[8] California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA – Tulare County. https://osfm.fire.ca.gov/media/6830/fhszs_map54.pdf. Accessed March 2020.

the transportation of hazardous materials in commerce." The HMTA empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Regulations apply to "…any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials."[9]

Superfund

“Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as “Superfund”, was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action.”[10]

Superfund Amendments and Reauthorization Act (SARA)

“Superfund Amendments and Reauthorization Act SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to $8.5 billion, expanded EPA’s response authority, strengthened enforcement activities at Superfund sites; and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List.”[11]

State

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 ET SEQ (HSAA)

“This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the state’s 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain

[9] U.S. Department of Energy, The Office of Health, Safety and Security. https://energy.gov/ehss/environment-health-safety-security. Accessed March 2020.

[10] Tulare County General Plan 2030 Update Background Report. Page 8-27.

[11] Ibid.

threshold level in the EPA's ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup."[12]

California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC)

"Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations (CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the RCRA program in California, and develops regulations, policies, guidance and technical assistance/training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the state's Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards."[13]

California Occupational Safety and Health Administration (Cal/OSHA)

"Cal/OSHA and the Federal OSHA are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Pursuant to the Occupational Safety and Health Act of 1970, Federal OSHA has adopted numerous regulations pertaining to worker safety, contained in the Code of Federal Regulations Title 29 (29 CFR). These regulations set standards for safe workplaces and work practices, including standards relating to hazardous material handling. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because California has a federally General Plan Background Report December 2007 approved OSHA program, it is required to adopt regulations that are at least as stringent as those identified in 29 CFR. Cal/OSHA standards are generally more stringent than federal regulations."[14]

Hazardous Materials Transport Regulations

"California law requires that Hazardous Waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance, which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing."[15]

Cal/EPA Cortese List

"The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the

[12] Op. Cit. Pages 8-28 to 8-29.

[13] Ibid. Page 8-29.

[14] Ibid. Pages 8-30 and 8-31.

[15] Ibid. Page 8-31.

list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA)."[16] The Cortese List identifies the following:

- Hazardous Waste and Substance Sites
- Cease and desist order Sites
- Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit Sites
- Leaking Underground Tank (LUST) Cleanup Sites
- Other Cleanup Sites
- Land Disposal Sites
- Military Sites
- WDR Sites
- Permitted Underground Storage Tank (UST) Facilities Sites
- Monitoring Wells Sites
- DTSC Cleanup Sites
- DTSC Hazardous Waste Permit Sites

Local

Tulare County Environmental Health Division

"The mission of the Division of Environmental Health is to enhance the quality of life in Tulare County through implementation of environmental health programs that protect public health and safety as well as the environment. We accomplish this goal by overseeing and enforcing numerous different programs, from food facility inspections to hazardous waste. All of our inspectors are licensed and/or certified in the field that they practice in and participate in continuing education to maintain licensure."[17]

Hazardous Materials/Certified Unified Program Agency (CUPA)

"The California Environmental Protection Agency designated the Tulare County Environmental Health as the CUPA for Tulare County. The role of the CUPA is to assure consolidation, consistency and coordination of the hazardous materials programs within the County".[18]

"The Tulare County Division of Environmental Health is responsible for overseeing the six hazardous materials programs in the County. The Tulare County Division of Environmental Health is responsible for inspecting facilities that handle hazardous materials, generate hazardous waste, treat hazardous

[16] Cal/EPA Cortese List background, http://www.calepa.ca.gov/sitecleanup/corteselist/Background.htm. Accessed March 2020.

[17] Tulare County Health and Human Services Agency, 2018. Environmental Health Division. Who Are We. Accessed March 2020 at: https://tularecountyeh.org/eh/index.cfm/about-us/who-are-we/

[18] Tulare County Health and Human Services Agency, 2018. Hazardous Materials (CUPA) Hazardous Materials/Certified Unified Program Agency (CUPA). Accessed March 2020 at: https://tularecountyeh.org/eh/index.cfm/our-services/hazardous-materials-cupa/

waste, own/operate underground storage tanks, own/operate aboveground petroleum storage tanks, or handle other materials subject to the California Accidental Release Program."[19]

Tulare County/Operational Area Emergency Operations Plan

"The Tulare County Office of Emergency Services (OES) is Tulare County's comprehensive emergency management program. The discipline of emergency management aims to create partnerships, plans, and systems to build capabilities and coordinate the efforts of government, industry, and voluntary organizations in all phases of an emergency.

The activities of Tulare County OES can be categorized under the four phases of the emergency management cycle: Preparedness, Response, Recovery, and Mitigation. The day-to-day activities of the program center around Preparedness and Mitigation phases, in order to combat potential hazards and minimize community impacts during the Response and Recovery phases. The following descriptions offer more detail about the activities in each phase of emergency management.

Preparedness

- Public Education
- Training & Exercise for responders
- Grants for public safety & health agencies

Response

Tulare County OES maintains the Emergency Operations Center (EOC) for the County and Operational Area. Tulare County OES also administers the AlertTC notification system and WebEOC crisis information management system.

Recovery

After the emergency is over, there is still considerable work to be done to help the community return to a pre-disaster state. Recovery often takes several years, perhaps even decades, to fully complete.

Mitigation

Mitigation is the process by which hazards and vulnerabilities are identified, and measures taken to decrease the potential for occurrence of the hazard, the vulnerability to the hazard should it occur, or both. Tulare County Office of Emergency Services implements the 2011 Tulare County Hazard Mitigation Plan."[20]

Multi-Jurisdictional Local Hazard Mitigation Plan

Tulare County has prepared the 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) to assess the natural, technological, and human-caused risks to County communities, to reduce the potential impact of the hazards by creating mitigation strategies. The 2017 MJLHMP represents the County's commitment to create a safer, more resilient community by taking actions to reduce risk and

[19] Ibid.

[20] 2011 Tulare County Hazard Mitigation Plan. http://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/. Accessed March 2020.

by committing resources to lessen the effects of hazards on the people and property of the County.[21] The MJLHMP was adopted in March 2018.

Tulare County Fire Department

"The Emergency Services Division consists of over 400 career fire officers and Extra Help Paid On-Call personnel who provide services 24 hours per day, seven days a week, year round from 27 community based fire stations. Tulare County Fire Department (TCFD) personnel respond to approximately 12,000 calls for service each year.

Services are provided to unincorporated communities, hamlets, and rural areas. Contract Fire Protection Services are provided to the City of Exeter and The Strathmore Fire Protection District. TCFD participates in the Statewide Mutual Aid system and maintains reciprocal agreements with local response organizations including incorporated Cities, neighboring Counties, and State & Federal Wildland agencies.

TCFD provides response to virtually every conceivable type of emergency situation. The "All Risk" emergency response functions include: Fire Suppression-Structural, Wildland, Vehicle; Agricultural and other type fires; Emergency Medical Services-Life Threatening and Emergency Medical Assists; Traffic and Industrial Accidents; Rescue-Water Rescue, Trench Rescue, Structural Collapse, Rope Rescue; Hazardous Conditions-Flammable/Chemical Spills & Leaks, Electrical & Flood & Severe Weather emergencies."[22]

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

HS-4.1 Hazardous Materials. The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.

HS-4.3 Incompatible Land Uses. The County shall prevent incompatible land uses near properties that produce or store hazardous waste.

HS-4.4 Contamination Prevention. The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

3.9.6 Impact Evaluation

Would the Project:

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

Project Impact Analysis: ***Less Than Significant Impact***

[21] Tulare County 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP). March 2018. Page 1. : http://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/. Accessed March 2020

[22] Tulare County Fire Department, 2018. Emergency Services. http://tularecounty.ca.gov/fire/index.cfm/services/emergency-services/. Accessed March 2020

Construction of the proposed Project for both its on- and off-site components will require the transport and use of small quantities of hazardous materials in the form of gasoline, diesel and oil. There is the potential for small leaks due to refueling of the construction equipment; however, standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for clean-up in the unlikely event of spills or leaks of construction related fuels and other hazardous materials. The BMP included in the SWPPP addresses storm water contamination, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials. All solid construction wastes will be disposed of or recycled by qualified service providers. In order to accommodate directing of construction materials to proper end-point destinations, contractors and workers will be educated on waste sorting, appropriate recycling storage areas, and measures to reduce landfill waste. Any hazardous wastes, in liquid or solid form, will be removed from the site by a licensed hazardous waste recycling or disposal firm.

The solar facility may be constructed using photovoltaic PV panels that contain a thin semiconductor layer containing cadmium telluride (CdTe). While CdTe itself is a hazardous substance in an isolated form, the CdTe in the PV panels is bound and sealed within the glass sheets and a laminate material. During the PV module manufacturing process, CdTe is bound under high temperature to a sheet of glass by vapor transport deposition, coated with an industrial laminate material, insulated with solar edge tape, and covered with a second sheet of glass. The module design results in the encapsulation of the semiconductor material between two sheets of glass thereby preventing the exposure of CdTe to the environment. Studies indicate that unless the PV module is purposefully ground to a fine dust, use of CdTe in PV modules do not generate any emissions of CdTe (Fthenakis 2003). CdTe PV modules; therefore, do not present an environmental risk during operations. CdTe releases are also unlikely to occur during accidental breakage or fire due to the high chemical and thermal stability of CdTe.

In addition, the proposed Project must comply with applicable local, state and federal regulations for hazardous materials management. These include regulations and programs administered by the Tulare County Health & Human Services Agency, Environmental Health Services Division as well as other requirements of state and federal laws and regulations, including compliance with the Uniform Fire Code for hazardous material storage. The proposed Project will not create a significant hazard to the public or the environment, therefore, impacts will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the proposed Project will comply with applicable local, state and federal regulations for hazardous materials management. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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

Project Impact Analysis: ***Less Than Significant Impact***

Project construction-related activities will require the limited use of hazardous materials that could result in potential adverse health and environmental impacts if these materials were used, stored, or disposed of improperly, causing accidents, spills, or leaks. Implementation of construction-related water quality BMPs (implemented as part of the SWPPP) will reduce the potential for accidental releases and ensure quick response to any spills to minimize impacts to the environment.

Despite the relatively open spaces surrounding the site, nearby sensitive receptors could be exposed to pollutant emissions during construction-related activities of the Project, resulting in health risks in the event of upset or accident conditions involving herbicides. However, vegetation control will primarily occur through mowing and the use of herbicide will be applied by qualified personnel following product label instructions and in accordance with applicable regulatory requirements (of both the County of Tulare Agricultural Commissioner and the State of California Department of Pesticide Regulation) such that the risk of upset and accident conditions will be minimized.

The proposed Project will comprise of solar modules, inverters, access roads, and electrical equipment. During operation, the Project will not likely handle hazardous materials, as such, it is unlikely that accidental release of those materials will occur. In addition, the Project will be required to comply with the applicable local, state, and federal regulations for hazardous materials management, including those regulations and programs administered by the Tulare County Health & Human Services Agency, Environmental Health Services Division and the Uniform Fire Code for hazardous material storage. Based on this analysis, impacts to the public or environment due to reasonable foreseeable upset and accident conditions will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the proposed Project will not create a significant hazard to the public or the environment through foreseeable or accidental conditions involving the release of hazardous materials into the environment. The Project will be required to comply with the applicable local, state, and federal regulations for hazardous materials management. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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

Project Impact Analysis: ***Less Than Significant Impact***

The nearest school to the proposed Project site is Ducor Union Elementary School, located at 23761 Avenue 56 in Ducor, approximately 0.30 miles west of the nearest Project boundary (from APN 321-190-001). The proposed Project involves the construction of a solar generation facility and will not emit hazardous emissions, involve hazardous materials, or create a hazard to the school. Therefore, impacts will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, Ducor Union Elementary School is located approximately 0.30 miles west of the nearest Project boundary. The proposed Project will not emit hazardous emissions, involve hazardous materials, or create a hazard to the school. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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?

Project Impact Analysis: ***Less Than Significant Impact***

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List." According to the Phase I ESA standard, regulatory record sources which included Federal, State and Local environmental databases provided by Environmental Data Resources Inc., for information pertaining to documented and/or suspected releases of regulated hazardous substances and/or petroleum products within specified search distance. Based on the environmental data search, no evidence of RECs or records of environmental liens have been found in connection with the Project site.[23]

Although not considered RECs, the Phase I ESA notes the following observations:

- Three irrigation wells were observed at three Project parcels located north of Avenue 56 (APNs 321-140-015, 321-120-002, and 321-070-014 [see Figure 2 in Appendix “G” of this DEIR]). One of the irrigation wells appears to be non-operational.
- Two plugged/abandoned oil gas wells identified on the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website are located on APN 321-140-013 (see Figure 2 in Appendix “G” of this DEIR).

[23] “*Phase I ESA”*. Page 23. Prepared by Technicon and included in Appendix “G” of this EIR.

- The residences and associated buildings on the site were constructed before the 1978 ban on the manufacture of friable asbestos containing materials. Therefore, asbestos-containing construction materials may be present in the building materials used for their construction.

Asbestos is usually safe when it is undisturbed. However, once disturbed (such as during remodeling or demolition), the fibers can become airborne. A significant impact could occur if the project involves the demolition of structures that may contain asbestos, and as a result, could represent a significant hazard to the public or the environment. However, the proposed Project will not involve the demolition of existing on-site structures or the alteration or removal of the on-site irrigation wells or oil gas wells. Therefore, the proposed Project will not create a significant hazard to the public or the environment. Therefore, a ***Less than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, no evidence of RECs or records of environmental liens have been found in connection with the Project site. Furthermore, the proposed Project will not involve the demolition of existing on-site structures or the alteration or removal of the on-site irrigation wells or oil gas wells. Therefore, the proposed Project will not create a significant hazard to the public or the environment. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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?

Project Impact Analysis: ***No Impact***

The Project site is not located within an area covered by an airport land use plan or within two miles of a public airport or public use airport. The Porterville Municipal Airport is located approximately 7.6 miles north of the Project site. The San Joaquin Sprayers Incorporated Heliport is located approximately 6.12 miles southwest of the Project site. Therefore, the Project will not interfere with airport operations or results in a safety hazard for people residing or working in the Project area. Thus, ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the Project site is not located within an

area covered by an airport land use plan or within two miles of a public airport or public use airport. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impact*** related to this resource woill occur.

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

Project Impact Analysis: ***Less Than Significant Impact***

Project construction-, operation- and maintenance-, and decommissioning-related activities could interfere with an adopted emergency response plan or emergency evacuation plan if construction-related activities were to involve the complete or partial closure of roadways, interfere with identified evacuation routes, or restrict access for emergency response vehicles.

As described in Section 3.17, Transportation, of this EIR, construction- and operation-related activities of the Project will not significantly affect current levels of service on area roads. Furthermore, the Project will not require closures of public roads, which could inhibit access by emergency vehicles. During construction-related activities of the Project, heavy construction-related vehicles (e.g., heavy duty tractor-trailers) could interfere with emergency response to the site or emergency evacuation procedures in the event of an emergency (e.g., by slowing vehicles traveling behind the truck). However, given that there are very few businesses and residences, and no emergency response stations in the immediate vicinity of the Project site, the intermittent, short-term, and temporary occurrence of heavy construction-related traffic will not result in inadequate emergency access. Therefore, the Project will allow for adequate emergency access during construction- and operation-related activities and a ***Less than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not significantly affect current levels of service on area roads. Furthermore, the Project will not require closures of public roads, which could inhibit access by emergency vehicles. Therefore, the proposed Project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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

Project Impact Analysis: ***Less Than Significant Impact***

According to the Fire Hazard Severity Zones map published by the California Department of Forestry and Fire Protection (Cal Fire)[24] and shown in **Figure 3.20-1** (see Section 3.20, Wildfire, of this DEIR), a majority of the Project site located east of State Route 65 is within a State Responsibility Area classified as having moderate potential for wildfires. The remainder of the Project site has not been zoned for fire severity by Cal Fire.

Perimeter roads will be constructed around the facility at least 20 feet wide. These perimeter roads will provide a fire buffer in accordance with the requirements of the Tulare County Fire Department and accommodate proposed Project operation and maintenance activities. As part of the Project, the applicant will coordinate with the Tulare County Fire Department to arrange site-specific training for first responders, construction workers, and operations and maintenance staff. The training will familiarize first responders and workers with the hazards and first-response requirements for a solar generation facility, and will include recommended techniques for fire suppression on PV and electrical systems. Combustible materials within the proposed Project and around the proposed Project boundary, including vegetation, will be actively managed by operations and maintenance personnel to minimize fire risks. Management of vegetation, in combination with the onsite, 20-foot-wide access roads will effectively serve to limit paths of any potential onsite fires.

Implementation of these Project components will minimize the risk of any onsite fire. Therefore, the proposed Project will not expose people or structure to wildland fires. Therefore, a ***Less than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. The proposed Project will be required to comply with the requirements of the Tulare County Fire Department. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

[24] California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA – Tulare County. https://osfm.fire.ca.gov/media/6830/fhszs_map54.pdf. Accessed March 2020.

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3.10 Hydrology and Water Quality

3.10.1 Summary of Findings

The proposed Project will result in a ***Less Than Significant Impact*** related to Hydrology and Water Quality. The impact analysis and determinations related to hydrology are based upon information obtained from the "*Rexford Solar Project - Stormwater Analysis*" report prepared by Westwood Professional Services, provided in Appendix "H" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.10.2 Introduction

CEQA Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hydrology and Water Quality. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area, as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Hydrology and Water Quality in the County. The Regulatory Setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report and/or Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines, Section 15126.2(a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The thresholds of significance for this section includes the following:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- 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, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, in a manner which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- In flood hazard, tsunami, seiche zones, risk release of pollutants due to project inundation.

3.10.3 Environmental Setting

“The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,050 square miles) and includes all of Kings and Tulare counties and most of Fresno and Kern counties... The southern portion of the San Joaquin Valley is subdivided into two separate basins, the San Joaquin and the Tulare, by a rise in the valley floor resulting from an accumulation of alluvium between the San Joaquin River and the Kings River fan. The valley floor in this region had been a complex series of interconnecting natural sloughs, canals, and marshes.

The economic development of the region is closely linked to the surface water and groundwater resources of the Tulare Lake region. Major rivers draining into the Tulare Lake region include the Kings, Kaweah, Tule, and Kern rivers. The original ecological character of the area has been changed dramatically, largely from the taming of local rivers for farming. In the southern portion of the region, significant geographic features include the lakebeds of the former Buena Vista/ Kern and Tulare lakes, comprising the southern half of the region; the Coast Ranges to the west; the Tehachapi Mountains to the south; and the southern Sierra Nevada to the east. The Tulare Lake region is one of the nation’s leading agricultural production areas, growing a wide variety of crops on about 3 million irrigated acres. Agricultural production has been a mainstay of the region since the late 1800s. However, since the mid-1980s, other economic sectors, particularly the service sector, have been growing.”[2]

Watershed (Surface Water)

“The Tulare Lake region is divided into several main hydrologic subareas: the alluvial fans from the Sierra foothills and the basin subarea (in the vicinity of the Kings, Kaweah, and Tule rivers and their distributaries); the Tulare Lake bed; and the southwestern uplands. The alluvial fan/basin subarea is characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey surface water originating from the Sierra Nevada. The dominant hydrologic features in the alluvial fan/basin subarea are the Kings, Kaweah, Tule, and Kern rivers and their major distributaries.”[3]

[2] “California Water Plan Update 2013, Tulare Lake Hydrologic Region”. Page TL-11.

[3] Ibid.

The White River drainage is just south of the Tule River drainage. The Tule sub-basin includes the White River drainage, which is similar to the region described in the California Water Plan Update in the preceding paragraph, with west and southwest-flowing streams, creeks, drainages and irrigation facilities conveying surface water to the Valley floor.

"Surface water from the Tulare Lake Basin only drains north into the San Joaquin River in years of extreme rainfall. This essentially closed basin is situated in the topographic horseshoe formed by the Diablo and Temblor Ranges on the west, by the San Emigdio and Tehachapi Mountains on the south, and by the Sierra Nevada Mountains on the east and southeast."[4]

Groundwater Aquifers and Wells

Groundwater resources in the Tulare Lake region are supplied by both alluvial and fractured rock aquifers. Alluvial aquifers are composed of sand and gravel or finer grained sediments, with groundwater stored within the voids, or pore space, between the alluvial sediments. Fractured rock aquifers consist of impermeable granitic, metamorphic, volcanic, and hard sedimentary rocks, with groundwater being stored within cracks, fractures, or other void spaces. The distribution and extent of alluvial and fractured-rock aquifers and water wells vary significantly within the region. A brief description of the aquifers for the region is provided below.

Alluvial Aquifers

The Tulare Lake Hydrologic Region contains 12 groundwater basins and 7 sub-basins recognized in California Department of Water Resources (DWR) Bulletin 18-2003 (California Department of Water Resources 2003) and underlie approximately 8,400 square miles, or about 50 percent of the region. The majority of the groundwater in the region is stored in alluvial aquifers. Figure TL-3 [of the California Water Plan Update 2013] shows the location of the alluvial groundwater basins and sub-basins and Table TL-1 [of the California Water Plan Update 2013] lists the associated names and numbers. Pumping from the alluvial aquifers in the region accounts for about 38 percent of California's total average annual groundwater extraction. The most heavily used groundwater basins in the region include Kings, Westside, Kaweah, Tulare Lake, Tule, and Kern County. These basins account for approximately 98 percent of the average 6.3 million acre-feet (maf) of groundwater pumped annually during the 2005-2010 period. Groundwater wells in the San Joaquin Valley extend to depths of more than 1,000 feet (Page 1986). Based on a series of irrigation pump tests, groundwater pumping rates in the various sub-basins were determined to range from about 650 gallons per minute (gpm) to about 1,650 gpm (Burt 2011).

Fractured-Rock Aquifers

Fractured-rock aquifers are generally found in the mountain and foothill areas adjacent to alluvial groundwater basins; as such, fractured-rock aquifers will not be found on the Valley floor nor within the Project site/location.

[4] "Water Quality Control Plan". Page I-1.

Surface Water Quality

"Surface water quality in the Basin is generally good, with excellent quality exhibited by most eastside streams. The Regional Water Board intends to maintain this quality."[5] Specific objectives outlined in the Water Quality Control Plan are listed below:[6]

- **Ammonia:** Waters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of unionized ammonia (NH3) to exceed 0.025 mg/l (as N) in receiving waters.
- **Bacteria:** In waters designated REC-1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.
- **Biostimulatory Substances:** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- **Chemical Constituents:** Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Color:** Waters shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
- **Dissolved Oxygen:** Waste discharges shall not cause the monthly median dissolved oxygen concentrations (DO) in the main water mass (at centroid of flow) of streams and above the thermocline in lakes to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration.
- **Floating Material:** Waters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
- **Oil and Grease:** Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- **pH:** The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.
- **Pesticides:** Waters shall not contain pesticides in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
- **Salinity:** Waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use of the water resources.

[5] "Water Quality Control Plan for the Tulare Lake Basin". May 2018. Page 3-9.

[6] Ibid. Pages 3-2 to 3-7.

- **Sediment:** The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- **Settleable Material:** Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- **Tastes and Odors:** Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.
- **Temperature:** Natural temperatures of waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.
- **Toxicity:** All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
- **Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Specific water quality objectives for ground waters outlined in the Water Quality Control Plan are summarized as follows:[7]

- **Bacteria:** In ground waters designated MUN, the concentration of total coliform organisms over any 7-day period shall be less than 2.2/100 ml.
- **Chemical Constituents:** Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Pesticides:** No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in ground waters in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.
- **Salinity:** All ground waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use and management of water resources.
- **Tastes and Odors:** Ground waters shall not contain taste- or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- **Toxicity:** Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s)."[8]

[7] Op. Cit. Pages 3-10 through 3-12.

[8] California Regional Water Quality Control Board Central Valley Region. "*Water Quality Control Plan for the Tulare Lake Basin Second Edition*". Revised January 2015 (with Approved Amendments). Pages III-7 through III-9. Accessed March 2020 at: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/tlbp_201501.pdf.

According to the "California Water Plan Update 2013, Tulare Lake Hydrologic Region", "Generally, the quality and the beneficial uses of the deep groundwaters remain the same as before humans entered the valley. A few areas within the Tulare Lake Basin have groundwaters that are naturally unusable or of marginal quality for certain beneficial uses. (Central Valley Regional Water Quality Control Board 2004) However, anthropogenic sources have impacted many of the shallower zones. Groundwater in the shallower part of the aquifer generally contains higher concentrations of anthropogenic contaminants, such as nitrates and pesticides, than the deeper part of the aquifer. The shallower part of the aquifer is generally younger water that indicates more recently recharged water. So, shallower wells, such as domestic supply wells, may provide better indication of pollutants from current land use activities. Pollutants from current land use activities may eventually impact deeper wells such as public supply wells (Burow et al. 2008). The following are the contaminants of concern in groundwater for this region:

- Salinity (Central Valley Regional Water Quality Control Board 2004).
- Nitrate (Dubrovsky et al. 1998, Burow et al. 2008, Center for Watershed Sciences 2012).
- DBCP (1,2-dibromo-3-chloropropane) (Dubrovsky et al. 1998, Burow et al. 2008, State Water Resources Control Board 2013).
- Arsenic (State Water Resources Control Board 2013).
- Gross Alpha Particle Activity and Uranium (State Water Resources Control Board 2013).
- Chromium 6 (State Water Resources Control Board 2011b).
- Localized contamination by (State Water Resources Control Board 2013):
    - Organic Compounds (Benzene, tetrachloroethylene (PCE), trichloroethylene (TCE), and perchlorate).
    - Fluoride"[9]

As discussed in the "*California Water Plan Update 2013, Tulare Lake Hydrologic Region*" (2013 CA Water Plan), the key ground water quality issues include the following.

Salinity: "Degradation of groundwater in the Tulare Lake Basin by salts is unavoidable without a plan for removing salts from the basin. Some of the salt load to the groundwater resource is primarily the result of natural processes within the basin, but some also occurs due to water imported from other basins to supply agricultural irrigation water. Natural processes include salt loads leached from the soils by precipitation, valley floor runoff, and native surface waters. Salts that are not indigenous to the basin water resources results from human activity. Salts come from imported water, soil leached by irrigation, animal wastes, fertilizers, and other soil amendments, municipal use, industrial wastewaters, and oil field wastewaters. These salt sources, all contributors to salinity increases, should be managed to the extent practicable to reduce the rate of ground water degradation. (Central Valley Regional Water Quality Control Board 2004)."[10]

Nitrates: "In a 1998 USGS study, nitrate concentrations in 24 percent (21 of 88) of the domestic wells sampled during 1993-1995 in the regional aquifer survey and land-use studies of the eastern San

[9] "California Water Plan Update 2013, Tulare Lake Hydrologic Region". Page TL-60 and TL-61. Accessed March 2020 at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2013/Regional-Reports/Water-Plan-Update-2013-Tulare- Lake-Regional-Report.pdf.

[10] Ibid. Page 61.

Joaquin Valley exceeded the drinking-water standard of 10 mg/L established by the EPA. A subsequent USGS study found that concentrations of nitrate and pesticides in the shallow part of the aquifer system at depths of domestic wells in the study area have increased over time due to continued contributions of nitrates and current use pesticides in the recharge water. Also, concentrations of nitrates and pesticides in the shallow part of the aquifer are likely to move to deeper parts of the groundwater flow system (Burow et al. 2008). The recent University of California, Davis report also found that travel times of nitrates from source to wells range from a few years to decades in domestic wells, and from years to many decades and even centuries in deeper production wells. While the quality of the shallower part of the aquifer is the result of past land use activities, the soil profile contains a stockpile of these contaminants that will continue to recharge the shallow aquifer and cause migration of contaminants to the deeper aquifer. Human-generated nitrate sources to groundwater include nitrogen applied to croplands, percolation of wastewater treatment plant and food processing wastes, leachate from septic system drain fields, urban parks, lawns, golf courses, leaky sewer systems, recharge from animal corrals and manure storage lagoons, and downward migration of nitrate-contaminated water via wells. Agricultural fertilizers and animal wastes applied to cropland are by far the largest regional sources of nitrate in groundwater; although, other sources can be locally relevant (Center for Watershed Sciences 2012)."[11]

DBCP: "Concentrations of DBCP, a soil fumigant banned since 1977, exceeded the EPA drinking-water standard of 0.2 mg/L in 18 of the 88 (or 20 percent) domestic wells sampled during 1993-1995 (Dubrovsky et al. 1998). DBCP concentrations were above the drinking water standard in 16 of 50 (or 32 percent) of domestic wells samples in orchards and vineyards from 2001-2002 (Burow et al. 2008)."[12]

Arsenic: "Public supply wells with levels of arsenic in the raw and untreated water that exceed the maximum contaminant level (MCL) were found in the south and western part of the Tulare Lake. Arsenic is generally considered to be naturally occurring (State Water Resources Control Board 2013). Arsenic has been linked to cancer of the bladder, lungs, skin, kidney, nasal passages, liver, and prostate (U.S. Environmental Protection Agency 2012a)."[13]

Gross Alpha Particle Activity and Uranium: "Gross alpha particle activity and uranium were found in raw and untreated water for many of the public water systems in the Tulare Lake Basin. These radionuclides are typically naturally occurring but are a concern because of the potential for health effects (State Water Resources Control Board 2013)."[14]

Chromium 6: "Chromium is a metal found in natural deposits of ores containing other elements, mostly as chrome-iron ore. It is also widely present in soil and plants. Recent sampling of drinking water throughout California suggests that hexavalent chromium may occur naturally in groundwater at many locations. Chromium may also enter the environment from human uses. Chromium is used in metal alloys such as stainless steel, protective coatings on metal, magnetic tapes, pigments for paints, cement, paper, rubber, composition floor covering, etc. Elevated levels (above the detection limit of 1 µg/L) of hexavalent chromium have been detected in many active and standby public supply wells

[11] Op. Cit.

[12] Op. Cit. Page 62.

[13] Op. Cit.

[14] Op. Cit.

along the west or valley floor portion of the Central Valley (State Water Resources Control Board 2011b)."[15]

Localized Contamination: Organic Compounds (Benzene, tetrachloroethylene (PCE), trichloroethylene (TCE), and perchlorate) **and Flouride:** "Benzene, perchlorate, PCE, and TCE have been detected at levels exceeding MCLs in the source water of a few water systems in the Tulare Lake region. Benzene was found in public supply wells in Arvin and Kettleman City. Perchlorate was found in wells in Tehachapi, Stallion Springs, East Tulare, and Exeter. PCE was found in public supply wells in the Fresno metropolitan area, Sanger, Arvin, Golden Hills, Oildale, Bakersfield, and Goshen areas. TCE was found in the Fresno and Bakersfield metropolitan areas (State Water Resources Control Board 2013). Benzene and perchlorate occur in the environment both naturally and due to human-made sources. PCE was the main solvent used for dry cleaning. Its occurrence in the environment is also associated with textile operations and metal degreasing operations. TCE is most associated with metal degreasing operations. Fluoride was found at levels exceeding MCLs in raw and untreated water in the Sierra and San Emigdio Mountains areas of Kern County (State Water Resources Control Board 2013). While fluoride is added to public drinking water supplies as a public health measure for reducing cavities among the treated population, it can also occur naturally as a result of the geological composition of soils and bedrock (U.S. Environmental Protection Agency 2011)."[16]

Surface Water Supply

"Surface water supplies for the Tulare Lake Basin include developed supplies from the Central Valley Project (CVP), the State Water Project (SWP), rivers, and local projects. Surface water also includes the supplies for required environmental flows. Required environmental flows are comprised of undeveloped supplies designated for wild and scenic rivers, supplies used for instream flow requirements, and supplies used for Bay-Delta water quality and outflow requirements. Finally, surface water includes supplies available for reapplication downstream. Urban wastewater discharges and agricultural return flows, if beneficially used downstream, are examples of reapplied surface water."[17]

"Along the eastern edge of the valley, the Friant-Kern Canal is used to divert San Joaquin River water from Millerton Lake for delivery to agencies extending into Kern County. All of the Tulare Lake region's streams are diverted for irrigation or other purposes, except in the wettest years. Historically, they drained into Tulare Lake, Kern Lake, or adjacent Buena Vista Lake. The latter ultimately drained to Tulare Lake, which is about 30 feet lower in elevation."[18]

"The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, are of excellent quality and provide the bulk of the surface water supply native to the Basin. Imported surface supplies, which are also of good quality, enter the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta- Mendota Canal. Adequate control to protect the quality of these resources is essential, as imported surface water supplies contribute nearly half the increase of salts occurring within the Basin."[19]

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[15] Op. Cit.

[16] Op. Cit.

[17] "Tulare County General Plan 2030 Update, Background Report". Page 10-7.

[18] "California Water Plan Update 2009, Tulare Lake Hydrologic Region". Page TL-5.

[19] "Water Quality Control Plan for the Tulare Lake Basin". May 2018. Page 1-2.

Groundwater Supply

"Surface water supplies tributary to or imported for use within the Basin are inadequate to support the present level of agricultural and other development. Therefore, ground water resources within the valley are being mined to provide additional water to supply demands."[20]

"Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath its western portion. Extensive alluvial fans associated with the Kings, Kaweah, and Tule Rivers provide highly permeable areas in which groundwater in the unconfined aquifer system is readily replenished. Interfan areas between the streams contain less permeable surface soils and subsurface deposits, impeding groundwater recharge and causing well yields to be relatively low. The mineral quality of groundwater in Tulare County is generally satisfactory for all uses."[21]

"Groundwater recharge is primarily from natural streams, other water added to streambeds, from deep percolation of applied irrigation water, and from impoundment of surface water in developed water bank/percolation ponds."[22]

"The Tulare Lake region has experienced water-short conditions for more than 100 years, which has resulted in a water industry that has consciously developed—through careful planning, management and facility design—the possibility of a shortage occurring in any year. Water demand is more or less controlled by available, reliable long-term water supplies. Over the years, agricultural acreage has risen and dropped largely based on water supplies. The region initially developed with surface water supplies; but local water users learned these supplies could widely vary in volume from year to year and drought conditions could quickly develop. The introduction of deep well turbines resulted in a dramatic rise in groundwater use in the early 1900s, subsequently resulting in dropping groundwater levels and land subsidence. Surface water storage and conveyance systems built to alleviate the overuse of groundwater provided an impounded supply of water that could be used during years with deficient surface water. This resulted in a regional reliance on conjunctive water use in the development of the local water economy. Efforts to address Delta environmental issues and the subsequent loss of surface water to the region is increasing groundwater use and creating concern that additional pumping will increase subsidence."[23]

"Groundwater overdraft is expected to decline statewide by 2020. The reduction in irrigated acreage in drainage problem areas on the west side of the San Joaquin Valley is expected to reduce groundwater demands in the Tulare Lake region by 2020."[24] According to the 2009 California Water Plan Update, it is anticipated that there will be a 550,000 acre-feet reduction in the water demand in the Tulare Lake Hydrologic Area under Current Growth trends. Slow & Strategic Growth trends may further decrease water demand, while Expansive Growth trends may increase water demand.

"There are 19 entities in Tulare County with active programs of groundwater management. These management programs include nearly all types of direct recharge of surface water. Groundwater recovery is accomplished primarily through privately owned wells. Among the larger programs of groundwater management are those administered by the Kaweah Delta Water Conservation District, the Kings River Water Conservation District, the Tulare Irrigation District, the Lower Tule Water Users

[20] Ibid.

[21] "Tulare County General Plan 2030 Update Background Report". Page 10-11.

[22] "California Water Plan Update 2009, Tulare Lake Hydrologic Region". Page TL-17.

[23] Ibid. Page TL-19.

[24] "California Water Plan Update 2013, Tulare Lake Hydrologic Region". Page TL-54.

Association, and the Alta Irrigation District, utilizing water from the Friant-Kern Canal and local streams. The Kings River Water Conservation District covers the western county."[25]

Groundwater Sub-Basin

"The Tulare Lake Hydrologic Region has 12 distinct groundwater basins and seven subbasins of the San Joaquin Valley Groundwater Basin, which crosses north into the San Joaquin River Hydrologic Region. These basins underlie approximately 5.33 million acres (8,330 square miles) or 49 percent of the entire hydrologic region. Groundwater has historically been important to both urban and agricultural uses, accounting for 41 percent of the region's total annual supply and 35 percent of all groundwater use in the state. Groundwater use in the region represents about 10 percent of the state's overall water supply for agricultural and urban uses."[26]

The Project area is within the Tule sub-basin of the San Joaquin Valley Groundwater Basin within the Tulare Lake Hydraulic Region.

"Water agencies in the Tulare Lake region have been practicing conjunctive use for many years to manage groundwater and assist dry year supplies. Groundwater recharge is primarily from rivers and natural streambeds, irrigation water percolating below the root zone of irrigated fields, direct recharge from developed ponding basins and water banks, and in-lieu recharge where surface water is made available in-lieu of groundwater pumping. Some water agencies accomplish recharge by directing available water into existing natural streambeds and sloughs, and others encourage application of water, when available, on farmed fields. The Deer Creek and Tule River Authority provides an example of how groundwater management activities can be coordinated with other resources. The authority, in conjunction with the US Bureau of Reclamation, has constructed more than 200 acres of recharge basins as part of its Deer Creek Recharge-Wildlife Enhancement Project. When available, the Project takes surplus water during winter months and delivers it to the basins, which serve as winter habitat for migrating waterfowl, creating a significant environmental benefit. Most of the water also recharges into the underlying aquifer, thereby benefiting the local groundwater system."[27]

Irrigation Districts in Tulare County

The Tulare County Resource Management Agency maintains a list of special districts that provide sewer and/or water service that cannot currently meet the demand of new development projects. The list provided by Tulare County RMA (last updated April 30, 2007) indicates that following water and/or sewer districts are either under a temporary cease and desist order by the Regional Water Control Board prohibiting any new connections, or have other limitations for water and sewer connections.

- Alpaugh Joint Powers Authority Water District;
- Cutler Public Utility District;
- Delft Colony Zone of Benefit (County RMA);
- Earlimart Public Utility District;
- El Rancho Zone of Benefit (County RMA);

[25] Ibid. Page 10-12.

[26] Ibid. Page TL-9 to TL-10.

[27] Ibid. Page TL-10.

- Orosi Public Utility District;
- Pixley Public Utility District;
- Pratt Mutual Water Company;
- Richgrove Public Utility District;
- Seville Zone of Benefit (County RMA);
- Seville Water Company;
- Springville Public Utility District;
- Tooleville Zone of Benefit (County RMA);
- Traver Zone of Benefit (County RMA); and
- Wells Tract Zone of Benefit (County RMA)[28]

Much of the County land is rural in nature and requires the use of private wells. If a project utilizes water from an existing irrigation district, then it will be up to the irrigation district to determine if the proposed Project could potentially create a significant impact related to water supply. An example of a potential impact could involve a need for a significant increase in the service levels of an irrigation district.

Flooding

"Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released."[29]

"Floods in the Tulare Lake Hydrologic Region can be caused by heavy rainfall; by dams, levees, or other engineered structures failing; or by extreme wet-weather patterns. Historically, in the Tulare Lake region flooding originates principally from melting of the Sierra snowpack and from rainfall. Flooding from snowmelt typically occurs in the spring and has a lengthy runoff period. Flooding in the region was intermittent, with severe flooding some years and drought in other years. Flash and slow-rise flooding are the most commonly experienced types of flooding in this hydrologic region. Floods that occur in the Tulare Lake region take a variety of forms and can be classified into flash, alluvial fan, debris flow, stormwater, slow-rise, and engineered structure failure flooding. For a complete record of floods, refer California Flood Future Report, Attachment C: Flood history of California technical memorandum (California Department of Water Resources and the U.S. Army Corps of Engineers 2013a)."[30]

[28] "California Water Plan Update 2009, Tulare Lake Hydrologic Region". Page TL-17.

[29] "Tulare County General Plan 2030 Update Background Report". Page 8-13.

[30] "California Water Plan Update 2009, Tulare Lake Hydrologic Region". Page TL-30.

"Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms."[31]

"The flood carrying capacity in rivers and streams has decreased as trees, vegetation, and structures (e.g., bridges, trestles, buildings) have increased along the Kaweah, Kings, and Tule Rivers. Unsecured and uprooted material can be carried down a river, clogging channels and piling up against trestles and bridge abutments that can, in turn, give way or collapse, increasing blockage and flooding potential. Flooding can force waters out of the river channel and above its ordinary floodplain. Confined floodplains can result in significantly higher water elevations and higher flow rates during high runoff and flood events."[32]

"Dam failure can result from numerous natural or human activities, such as earthquakes, erosion, improper siting, rapidly rising flood waters, and structural and design flaws. Flooding due to dam failure can cause loss of life, damage to property, and other ensuing hazards. Damage to electric-generating facilities and transmission lines associated with hydro-electric dams could also affect life support systems in communities outside the immediate hazard area."[33]

3.10.4 Existing Conditions

Groundwater

The Project area overlies the Tule Subbasin. "The Tule Subbasin is located primarily in southern Tulare County with a small portion in Kern County. The Subbasin spans approximately 467,000 acres (733 square miles) and is bounded as follows: on the west by the Tulare County line and the boundary to the Tulare Lake Subbasin; on the north by the northern boundaries of Lower Tule Irrigation District and Porterville Irrigation District, along the boundary of the Kaweah Groundwater Subbasin; on the east at the edge of the alluvium and crystalline bedrock of the Sierra Nevada foothills; and to the south at the Tulare-Kern County line. The Tule River, Deer Creek, and White River empty into the Tulare Lake bed and serve as the major drainages in the Subbasin."[34]

"In the southern part of the Subbasin, in which the Project area is located, groundwater levels were relatively stable between 1987 and 2007 but began declining after 2007. The Tule Subbasin has an estimated average overdraft of 160,000 [acre feet per year] AFY, which has led to issues such as groundwater depression zones and land subsidence."[35]

"…Groundwater produced from the Tule Subbasin is primarily used for irrigated agriculture. Between 1987 and 2017, the Tule Subbasin lost an average of 777,000 AFY in groundwater pumping and natural outflow. During this same period, the Tule Subbasin gained an average 617,000 AFY in natural

[31] "Tulare County General Plan 2030 Update Background Report". Page 8-14.

[32] Ibid.

[33] Op. Cit. Page 8-17.

[34] "*Rexford Solar Project Water Supply Assessment*"." Page 12. Prepared by Rincon and included in Appendix "K" of this EIR.

[35] Ibid. Page 13.

and artificial recharge. Consequently, the Subbasin experienced an annual net loss of approximately 160,000 AFY in stored groundwater. This suggests the presence of overdraft conditions.

Flooding

According to the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (Map Number 06107C1975E and 06107C2325E), the majority of the Project site is located within Zone X. Zone X is an area determined to be outside the 0.2 percent annual chance floodplain. As shown in **Figure 3.10-1**, portions of the solar farm site (APNs 339-050-004, 339-050-013, and 339-070-026) and transmission/collector line near the White River are mapped as Zone A. Zone A is an area subject to a 1 percent or greater annual chance of flooding in any given year.

3.10.5 Regulatory Setting

Federal

Clean Water Act/NPDES

"The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972… Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters… The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters."[36]

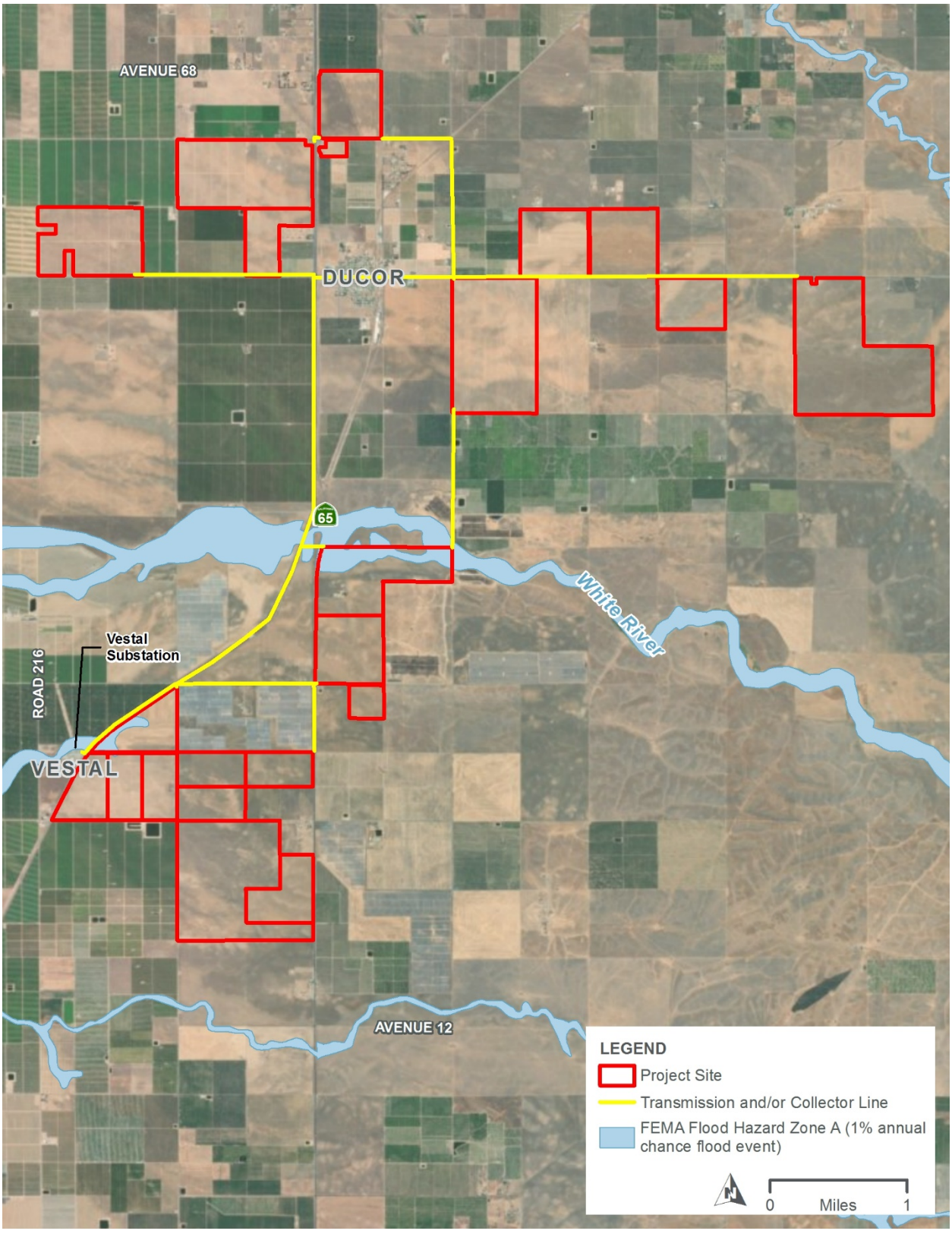
Safe Drinking Water Act

"The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards… SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.)"[37]

[36] U.S. Environmental Protection Agency. Summary of the Clean Water Act - http://www.epa.gov/lawsregs/laws/cwa.html. Accessed March 2020.

[37] U.S. Environmental Protection Agency. Summary of the Safe Drinking Water Act - http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm. Accessed March 2020.

Figure 3.10-1. Flood Zone Map



United States Environmental Protection Agency (EPA)

The mission of EPA is to protect human health and the environment. “EPA's purpose is to ensure that:

- All Americans are protected from significant risks to human health and the environment where they live, learn and work;
- National efforts to reduce environmental risk are based on the best available scientific information;
- Federal laws protecting human health and the environment are enforced fairly and effectively;
- Environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- All parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- Environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and
- The United States plays a leadership role in working with other nations to protect the global environment.”[38]

United States Army Corps of Engineers (USACE)

“The Department of the Army Regulatory Program is one of the oldest in the Federal Government. Initially it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands.”[39]

National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP). “The Act was motivated by the devastating loss of life and property by Hurricane Betsy in 1965 and created the National Flood Insurance Program (NFIP). Since then, the program has aimed to reduce the impact of flooding on private and public structures by providing affordable insurance to property owners, renters and businesses, as well as by encouraging communities to adopt and enforce floodplain management regulations.”[40] “These efforts help mitigate the effects of flooding on new and improved structures.

[38] U.S. Environmental Protection Agency. What we do. http://www.epa.gov/aboutepa/whatwedo.html. Accessed March 2020.

[39] Army Corps of Engineers http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx. Accessed March 2020.

[40] National Flood Insurance Program Summary: Accessed March 2020 at: https://www.fema.gov/nfip50.

Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of general risk insurance, but also of flood insurance, specifically."[41]

State Agencies & Regulations

Porter-Cologne Water Quality Control Act

"Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the State Water Resources Control Board (State Board) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine Regional Water Quality Control Boards (Regional Boards) to oversee water quality on a day-to-day basis at the local/regional level."[42]

State Water Quality Control Board

"The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters.

The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate."[43]

Regional Water Quality Control Board

"There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality."[44]

"The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of the Regional Boards and the State Water Resources Control Board are contained in the Porter- Cologne Water Quality Control Act."[45]

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[41] National Flood Insurance Program. Accessed March 2020 at: https://www.fema.gov/national-flood-insurance-program.

[42] California Department of Water Resources. Porter-Cologne Water Quality Control Act Summary. Accessed March 2020 at: http://ceres.ca.gov/wetlands/permitting/Porter_summary.html.

[43] California Water Boards. Mission Statement. Accessed March 2020 at: http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml.

[44] Ibid.

[45] Central Valley Water Quality Control Board Accessed March 2020 at: http://www.swrcb.ca.gov/centralvalley/about_us/.

California Department of Water Resources (DWR)

DWR's mission is "To manage the water resources of California, in cooperation with other agencies, to benefit the state's people and to protect, restore, and enhance the natural and human environments."[46] DWR provides a summary of their responsibilities as follows; "Our responsibilities and duties include:

- Preventing and responding to floods, droughts, and catastrophic events
- Informing and educating the public on water issues
- Developing scientific solutions
- Restoring habitats
- Planning for future water needs, climate change impacts, and flood protection
- Constructing and maintaining facilities
- Generating power
- Ensuring public safety
- Providing recreational opportunities"[47]

In addition, DWR also conducts the follow:

- "Dam Safety - Engineers and engineering geologists review and approve plans and specifications for the design of dams throughout California and oversee their construction to ensure compliance.
- Education - We educate students and communities throughout California on water issues and water safety.
- Flood Preparedness - We work with communities and emergency responders to prepare for flood season.
- Science - Science is integral to our policy and management decisions – our scientists work in a wide range of specialties and develop solutions for the complexities of sustainable water management in California.
- Water Supply & Storage – We operate and maintain a complex water storage and supply system, transporting water more than 600 miles from north to south. We also regulate the use of groundwater, which accounts for at least 1/3 of all water use in California.
- Drought Mitigation - Because drought is a recurring feature of California's climate, drought preparedness is an ongoing activity that includes managing water supply reliability.
- Emergency Management - We protect life and property from catastrophic events such as flood, drought, and dam or levee failure.
- Infrastructure - We're responsible for the construction, maintenance, evaluation, and safety of a number of water infrastructure facilities, including 34 storage facilities, 21 dams, and 705 miles of canals and aqueducts.

[46] Department of Water Resources. "The DWR Mission". Accessed March 2020 at: https://water.ca.gov/

[47] California Department of Water Resources. Accessed March 2020 at: https://water.ca.gov/What-We-Do

- Recreation - The SWP provides extensive recreational activities, including camping, boating, swimming, hiking, and fishing. We invite the public to explore our 3 visitors centers.
- Sustainability - Sustainability is one of our core values; the goal of our work is to ensure the ability of natural ecosystems to meet the needs of future generations."[48]

California Water Boards Central Valley – R5

The California Water Boards Central Valley – R5 (Region 5) defines their missions as, "To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations."46 In addition, the CA Water Boards Central Valley – R5 indicates their Duty as, "The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of the Regional Boards and the State Water Resources Control Board are contained in the Porter-Cologne Water Quality Control Act."[49]

SB 610 (Costa 2001)

This Bill requires additional information to be included as part of an urban water management plan if groundwater is identified as a source of water available to the supplier. This law also requires an urban water supplier to include in the plan a description of all water supply projects and programs that may be undertaken to meet total projected water use.

Local Policy & Regulations

Tulare County Environmental Health Services

"The mission of the Division of Environmental Health is to enhance the quality of life in Tulare County through implementation of environmental health programs that protect public health and safety as well as the environment. We accomplish this goal by overseeing and enforcing numerous different programs, from food facility inspections to hazardous waste. All of our inspectors are licensed and/or certified in the field that they practice in and participate in continuing education to maintain licensure."[50] This division requires water quality testing of public water systems. Any project that involves septic tanks and water wells within Tulare County is subject to approval by this agency. All recommendations provided by this division will be added as mitigation measures to ensure reduction of environmental impacts.

[48] California Department of Water Resources. Accessed March 2020 at: http://www.water.ca.gov/about/mission.cfm.

[49] The California Water Boards Central Valley – R5. Accessed March 2020 at: https://www.waterboards.ca.gov/centralvalley/about_us/

[50] Tulare County Environmental Health Division, Who Are We. Accessed March 2020 at: https://tularecountyeh.org/eh/index.cfm/about-us/whoare-we/

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

PF-4.14 Compatible Project Design. The County may ensure proposed development within CACUABs is compatible with future sewer and water systems, and circulation networks as shown in city plans.

AG-1.17 Agricultural Water Resources. The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture. The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

HS-4.4 Contamination Prevention. The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-5.2 Development in Floodplain Zones. The County shall regulate development in the 100- year floodplain zones as designated on maps prepared by FEMA in accordance with the following:

1. Critical facilities (those facilities which should be open and accessible during emergencies) shall not be permitted.
2. Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible.
3. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.4 Multi-Purpose Flood Control Measures. The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.

HS-5.9 Floodplain Development Restrictions. The County shall ensure that riparian areas and drainage areas within 100-year floodplains are free from development that may adversely impact floodway capacity or characteristics of natural/riparian areas or natural groundwater recharge areas.

HS-5.11 Natural Design. The County shall encourage flood control designs that respect natural curves and vegetation of natural waterways while retaining dynamic flow and functional integrity.

WR-2.1 Protect Water Quality. All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement. The County shall continue to support the State in monitoring and enforcing provisions to control nonpoint source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.

WR-2.3 Best Management Practices (BMPs). The County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.

WR-2.4 Construction Site Sediment Control. The County shall continue to enforce provisions to control erosion and sediment from construction sites.

WR-2.5 Major Drainage Management. The County shall continue to promote protection of each individual drainage basin within the County based on the basins unique hydrologic and use characteristics.

WR-2.6 Degraded Water Resources. The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.

WR-2.8 Point Source Control. The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

WR-3.3 Adequate Water Availability. The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

WR-3.6 Water Use Efficiency. The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

WR-3.10 Diversion of Surface Water. Diversions of surface water or runoff from precipitation should be prevented where such diversions may cause a reduction in water available for groundwater recharge.

3.10.6 Impact Evaluation

Would the Project:

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

Project Impact Analysis: ***Less Than Significant Impact***

Construction- and operation-related activities of the Project could result in violation of water quality standards as a result of anticipated site soil disturbance and other construction-related activities. The Project site is relatively flat, resulting in a limited potential for any substantial runoff to occur. Conventional grading will occur throughout the site. However, because the Project area is relatively flat, it is anticipated that grading will be limited in most areas. Grading and maintenance excavation will also be required for the proposed foundations. These activities could affect current drainage patterns and/or erosion on the Project site; however, the design of access road gradients and other Project features (such as the inverter pads), will prevent substantial alterations to drainage patterns and/or erosion within the site. The amount of impervious surfaces from construction of access roads; PV module foundations; substation; and the O&M building will be insignificant considering the Project site's overall pervious surfaces and any drainage which might occur will also be spread across the entire Project area.

Potential impacts on surface water quality from erosion and sedimentation are anticipated to be localized, short-term, and temporary during construction- and decommissioning/site restoration-related activities. There are no anticipated adverse impacts on ground water quality due to erosion and sedimentation.

As Project construction-related activities will disturb more than one acre of soil, a Storm Water Pollution Prevention Program (SWPPP) will be prepared by a qualified erosion control engineer for the Project consistent with the NPDES Construction General Permit requirements.

The SWPPP will include best management practices (BMPs) to be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby drainages, and will be applicable to all aspects of the Project. Specific BMPs for the construction-related phase will be identified during completion and County review of the SWPPP. Typical BMPs to be implemented could include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Installation of a stabilized construction-related entrance/exit and stabilization of disturbed areas;
- Implementing erosion controls;
- Properly managing construction-related materials;
- Proper protections for fueling and maintenance of equipment and vehicles; and/or
- Managing waste, aggressively controlling litter, and implementing sediment controls.

In addition, during Project construction- and decommissioning-related activities, any activity that results in the accidental release of hazardous or potentially hazardous materials could result in water quality degradation. Materials that could contribute to this impact include, but are not limited to: diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, cement slurry, and other fluids utilized by construction- and maintenance-related activities vehicles and equipment. Motorized equipment could leak hazardous materials such as motor oil, transmission fluid, or antifreeze due to inadequate or improper maintenance, unnoticed or unrepaired damage, improper refueling, or operator error. As applicable, the Project proponent will be required to provide a Hazardous Materials Business Plan that will delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction-related activities; and establish public and agency notification procedures for spills and other emergencies, including fires. The Project proponent will, as applicable, provide the Hazardous Materials Business Plan to all contractors working on the Project site and will ensure that one copy is available at the Project site at all times.

Implementation of the SWPPP will ensure that impacts on water quality from construction-related activities will be minimized. Furthermore, the Project proponent will implement BMPs including placement of silt fencing at strategic locations and other erosion control measures designed to minimize potential water quality impacts during the construction-related phase. Topsoil will be separated and stockpiled separately from subsoil and stabilized to prevent erosion. When Project construction-related activities are complete, stripped subsoil and topsoil will be replaced as required by the Reclamation Plan.

Operation of the Project will include routine maintenance of the site such as mowing, and seasonal solar panel washing. The Project will not generate a substantial amount of wastewater, nor will it generate a substantial amount of solid wastes. Water utilized for panel washing will dissipate into the alluvial soil on-site, or evaporate depending upon seasonal temperature variations. Project operations will not include activities that will degrade water quality, or include elements that will violate waste discharge requirements or other water quality standards.

As such, construction, decommissioning, and operation-related activities of the Project will result in a ***Less than Significant Impact.***

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided in the Water Quality Control Plan for the Tulare Lake Basin and the requirements of the Tulare County Environmental Health Department.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the Project will be required to prepare and implement a SWPPP. Implementation of the SWPPP will ensure that impacts on water quality from construction-related activities will be minimized. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource wi;; be ***Less than Significant***.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Project Impact Analysis: ***Less Than Significant Impact***

During the construction-related period of up to 24 months, it is estimated that the proposed Project will use up to approximately 400 acre-feet of water during construction-related activities. Operational water demands, which include water used for fire suppression, solar PV panel washing and concentrate, and operation of the proposed O&M building, will total approximately 50 acre-feet per year (AFY). The proposed Project's amortized annual water demand is estimated to be approximately 61.4 AFY.

The Project area is located in an area that has historically supported agricultural production, and although the site is not currently irrigated, it has been in the past. Previous irrigation water was provided via groundwater pumped on site (from the Tule Subbasin). Implementation of the proposed Project will replace past, present, or future (that is, during the life of the Project) agricultural water uses on the Project area, and therefore, based on the nature of the Project, will result in a decreased operational water demand on the Project area.

The proposed Project will source water from one or more of the following water sources: pumped from an on- or off-site groundwater well in the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin, or purchased imported water from the Kern-Tulare Water District.

"The San Joaquin Valley Groundwater Basin is not currently adjudicated, and groundwater supplies are managed through implementation of GSPs under SGMA, as well as IRWMPs. Based

on information provided in the applicable GSPs, sufficient groundwater supply is available to meet the construction and operational requirements of the proposed Project."

The Eastern Tule GSA, in coordination with the other GSAs in the Tule Subbasin, has established a Subbasin Sustainability Goal to achieve no long-term change in groundwater storage by year 2040. The GSP identifies a series of projects and management actions that will allow for the Eastern Tule GSA (in coordination with the other Tule Subbasin GSAs) to achieve the Tule Subbasin Sustainability Goal. The Tule Subbasin's projected 2040-2050 "sustainable yield" (average rate of groundwater use that can be maintained without endangering the long-term quality or quantity of water in the basin) suggests that with implementation of management actions and programs identified in the Eastern Tule GSP, overdraft conditions in the Tule Subbasin will recover, thereby improving water supply reliability.[51]

Similar to the Tule Subbasin, "it is reasonable to anticipate that water supply reliability in the Kern County Subbasin is improving with implementation of groundwater management efforts including compliance with SGMA. The [Kern Groundwater Authority] KGA, in coordination with the other GSAs in the Subbasin, established in its GSP a sustainability goal for the Subbasin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline of 2020. The Kern County Subbasin Sustainability Goal is to:

- Achieve sustainable groundwater management in the Kern County Subbasin through the implementation of projects and management actions at the member agency level of each GSA
- Maintain its groundwater use within the sustainable yield of the basin as demonstrated by monitoring and reporting groundwater conditions
- Operate within the established sustainable management criteria, which are based on the collective technical information presented in the GSPs in the Subbasin
- Collectively bring the Subbasin into sustainability and to maintain sustainability over the implementation and planning horizon

The KGA GSP identifies a list of over 150 projects and management actions designed to maintain or achieve sustainability within the Subbasin. Projects include: expansion of local and regional conveyance and recharge facilities to take advantage of surplus supplies; new conveyance and recharge projects; and participation in the California Water Fix or other thru-Delta improvement projects. Management actions include: implementation of district level fee structures to incentivize reduced groundwater pumping; participation in local, regional, and state-wide water markets; and setting allocations for groundwater use by landowners based on the sustainable yield of the management area.

Should the Proposed Project use water pumped from the Kern County Subbasin to support the proposed Project, such use will be consistent with management direction provided in the KGA GSP."[52]

Based on this analysis, the proposed Project is not anticipated to interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management

[51] "*Rexford Solar Project Water Supply Assessment*"." Pages 22-24. Prepared by Rincon and included in Appendix "K" of this EIR.

[52] Ibid. Page 24.

of the San Joaquin Basin or the Tule Subbasin. Therefore, a ***Less than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County and the San Joaquin Valley Groundwater Basin.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, sufficient groundwater supply is available to meet the construction- and operational-related requirements of the proposed Project. The proposed Project is not expected to interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the San Joaquin Basin or the Tule Subbasin. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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 off-site?

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?

iv) Impede or redirect flood flows?

Project Impact Analysis: ***Less Than Significant Impact***

The proposed Project does not require significant grading and natural drainage patterns will not be substantially changed or altered. The nature of the existing, relatively flat terrain (and arid climate) of the site is not conducive to substantial erosion from storm-related water. However, Project site construction-related activities will include grading, roadwork, and other site soil disturbances that could transport silt and other sediments on- or off-site. As mentioned under item a), a SWPPP will be prepared for the Project. Erosion prevention measures and other BMPs will be implemented during earthmoving-related activities (e.g., site grading). The erosion control plans will specify the implementation of typical erosion control design features (such as straw wattles, check dams, fabric blankets, and silt fencing). Because the site is predominantly flat and will remain flat after construction-related activities with the addition of a small percentage of the site converted to impervious surface, the Project will not substantially alter the existing drainage pattern of the site or the surrounding area and will result in a ***Less Than Significant Impact*** to on- and offsite erosion and siltation.

Upon approval, the Project will be located in a rural agricultural region/setting; there are no existing or planned improvements or stormwater conveyance structures proposed as part of the Project. Construction-related activities will involve soil disturbances from earthmoving activities, such as

site grading and the use of related equipment, which in the absence of appropriate erosion control measures, could contribute sediments and or silt into the White River. However, as noted previously, a SWPPP will be prepared for the Project along with other BMPs that will minimize release of silt, and other pollutants off-site. Therefore, the Project will result in a ***Less Than Significant Impact***.

As shown in **Figure 3.10-1,** portions of the solar farm site (APNs 339-050-004, 339-050-013, and 339-070-026) and transmission/collector line near the White River are mapped as Zone A. Zone A is an area subject to a 1 percent or greater annual chance of flooding in any given year. The proposed Project will be designed to avoid the siting of structures in the 100-year flood zone. Therefore, the proposed Project will not substantially impede or redirect flood flows and a ***Less Than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not substantially affect the drainage pattern of the site or area. As part of the SWPPP, erosion prevention measures and other BMPs will be implemented during earthmoving-related activities (e.g., site grading). Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?

Project Impact Analysis: ***Less Than Significant Impact***

As previously indicated, portions of the solar farm site (APNs 339-050-004, 339-050-013, and 339-070-026) and transmission/collector line near the White River are mapped as Zone A. However, the proposed Project will be designed to avoid the siting of structures in the 100-year flood zone. There are no dams or other large levees in the vicinity of the proposed Project which could fail and ultimately lead to Project inundation. The Project is not located in the coastal zone or near a lake or reservoir; therefore, the Project will not be located in an area subject to inundation by seiche, tsunami, or related mudflow. As the Project is not located in a tsunami, or seiche zone, the risk of Project inundation is unlikely. As a result, the Project will have a ***Less Than Significant Impact*** with regard to the risk of the release of pollutants due to Project inundation.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan General Plan background Report and Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the Project is not located in the coastal zone or near a lake or reservoir; therefore, the Project will not be located in an area subject to inundation by seiche, tsunami, or related mudflow. The proposed Project will be designed to avoid

the siting of structures in the 100-year flood zone. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***No Project-specific or Cumulative Impact*** related to this Checklist Item will occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Project Impact Analysis: ***Less Than Significant Impact***

The Project is located in the Tule Subbasin. Within the Tule Subbasin, there are six Groundwater Sustainability Agencies. The Project is located within the Eastern Tule GSA. There is no existing sustainable groundwater management plan relevant to the groundwater basin underlying the Project.

The Water Quality Control Plan for the Tulare Lake Basin ("Basin Plan") designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies for waters within the Tulare Lake Basin. As discussed earlier, the Project will be required to prepare a SWPPP consistent with the NPDES Construction General Permit. This SWPPP will outline BMPs designed to avoid and reduce impacts to surface and groundwater quality, in compliance with the Construction General Permit. As a result, construction of the Project will not conflict with or obstruct implementation of the Basin Plan.

During Project operation, panel washing will require the use of water. Water utilized for panel washing will dissipate into the alluvial soil or evaporate on-site. Project operation will not include activities which will degrade water quality, violate discharge requirements, or conflict or obstruct with the implementation of the Basin Plan. Project decommissioning will involve the removal of equipment and restoration of the site to pre-construction conditions, as feasible. Therefore, Project decommissioning will return the site to pre-Project conditions and will not involve any activities which could obstruct or conflict with the implementation of the Basin Plan. As a result, impacts under this item will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan General Plan background Report and Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the Project will be required to prepare a SWPPP consistent with the NPDES Construction General Permit. This SWPPP will outline BMPs designed to avoid and reduce impacts to surface and groundwater quality, in compliance with the Construction General Permit. As a result, construction of the Project will not conflict with or obstruct implementation of the Basin Plan. Project operation will not include activities which will degrade water quality, violate discharge requirements, or conflict or obstruct with the implementation of the Basin Plan. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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3.11 Land Use and Planning

3.11.1 Summary of Findings

The proposed Project will result in a ***Less than Significant Impact*** related to Land Use and Planning. A collection of Tulare County Board of Supervisors adopted Resolutions associated with solar facilities on agricultural lands is included in Appendix "B" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.11.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Land Use and Planning. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting section provides a description of the Land Use and Planning setting in the County. The Regulatory Setting section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines. Section 15126.2 (a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The thresholds of significance for this section includes the following:

- Divide a community
- Conflict with applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

3.11.3 Environmental Setting

"Tulare County is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin Valley floor, which is very fertile and extensively cultivated. In addition to its agricultural production, the County's economic base also includes agricultural packing and shipping operations. Small and medium size manufacturing plants are located in the western part of the county and are increasing in number. Tulare County contains portions of Sequoia National Forest, Sequoia National Monument, Inyo National Forest, and Kings Canyon National Park. Sequoia National Park is entirely contained within the county."[2]

"The County encompasses approximately 4,840 square miles of classified lands (lands with identified uses) and can be divided into three general topographical zones: a valley region; a foothill region east of the valley area; and a mountain region just east of the foothills. The eastern half of the county is generally comprised of public lands, including the Mountain Home State Forest, Golden Trout Wilderness area, and portions of the Dome Land and south Sierra Wilderness areas. Federal lands, which include wilderness, national forests, monuments and parks, along with County parks, make up 52 percent of the County, the largest percentage found in the County. Agricultural uses, which include row crops, orchards, dairies, and grazing lands on the Valley floor and in the foothills total over 2,020 square miles or about 43 percent of the entire County. Urban uses such as incorporated cities, communities, hamlets, other unincorporated urban uses, and infrastructure rights-of-way make up the remaining land in the County."[3]

3.11.4 Existing Conditions

The Project site consists of 40 discontiguous parcels encompassing approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. Neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route (SR) 65.

The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures. The portion of the Project site located south of the White River is surrounded by the Tulare Solar Center facility.

[2] Tulare County General Plan 2030 Update RDEIR. Page 3.1-5. http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf. Accessed March 2020.
[3] Ibid. Page 3.1-6.

Area Plans

The County prepared area plans for two of the three major geographic regions of the county: the San Joaquin rural valley floor and the foothills. No plan has been adopted for the whole mountain region. The majority of the Project site is located within the Rural Valley Lands Area Plan, while the easternmost parcels (east of Road 248) (APN Nos. 321-210-004, 321-070-026, 323-040-006, -007, -008,) are located within the Foothill Growth Management Area Plan.

Rural Valley Lands Plan

"The [Rural Valley Lands Plan] (RVLP) applies to about 773,500 acres of the valley portion of the County, outside the planned Urban Development Boundaries (UDB) and generally below the 600-foot elevation contour line along the foothills of the Sierra Nevada Mountain Range…

The purpose of the RVLP is to protect and maintain the agricultural viability of rural valley areas by establishing requirements for exclusive agricultural zoning (containing minimum parcel sizes) appropriate to sustain agriculture and implementing a policy that utilizes resource information to determine the suitability of rural lands for nonagricultural uses…

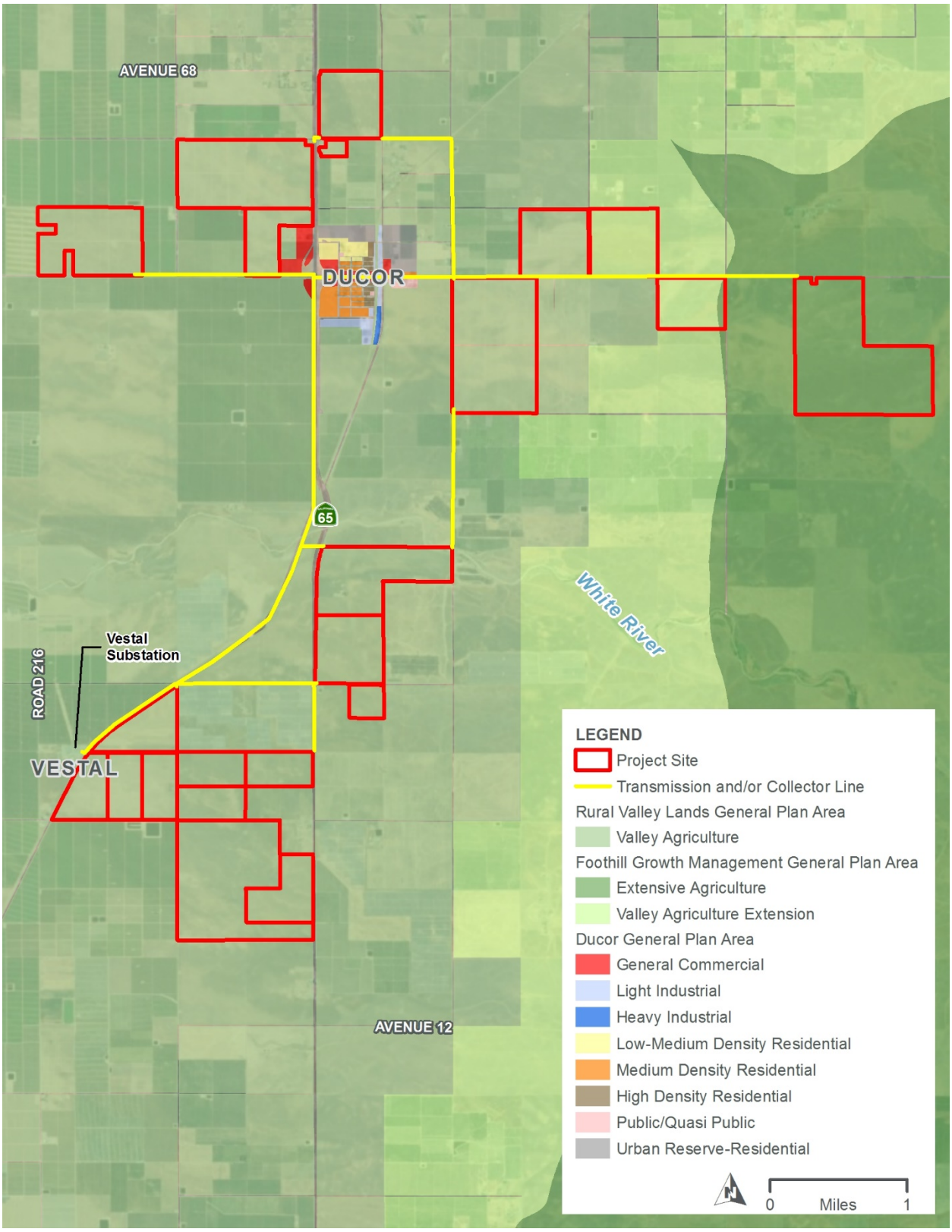
The RVLP utilizes five exclusive agriculture (AE) zones, each requiring a different minimum parcel size (ranging from five to eighty acres). These zones are as follows: AE, AE-10, AE-20, AE-40, and AE-80."[4]

As shown in **Figure 3.11-1**, the portion of the Project site located within the RVLP is designated as Valley Agriculture. "This designation establishes areas for intensive agricultural activities on prime valley agricultural soils and other productive or potentially productive valley lands where commercial agricultural uses can exist without conflicting with other uses, or where conflicts can be mitigated. Uses typically allowed include irrigated crop production, orchards and vineyards; livestock; resource extraction activities and facilities that directly support agricultural operations, such as processing; and other necessary public utility and safety facilities."[5]

[4] Tulare County General Plan 2030 Update Background Report. Page 3-13. http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

[5] Tulare County General Plan 2030 Update. Page 4-15.

Figure 3.11-1. General Plan Designations



Foothill Growth Management Plan

"The [Foothill Growth Management Plan] (FGMP) includes a comprehensive statement of the development policies and standards that prescribe land use and circulation patterns for the foothill region of Tulare County. The plan encompasses 675,641 acres of land generally at a 600-foot elevation to the west and bounded on the east by the federally owned parks in the Sierra Nevada Mountains and some privately owned lands on the San Joaquin Valley floor. The plan's policies set guidelines for community identity, new development, recreation/open space, agriculture, environmental protection, scenic corridors protection, history/archaeology, infrastructure facilities, and public services."[6]

The FGMP utilizes four land use designations: Development Corridor, Extensive Agriculture, Foothill Extension, and Valley Agriculture Extension.

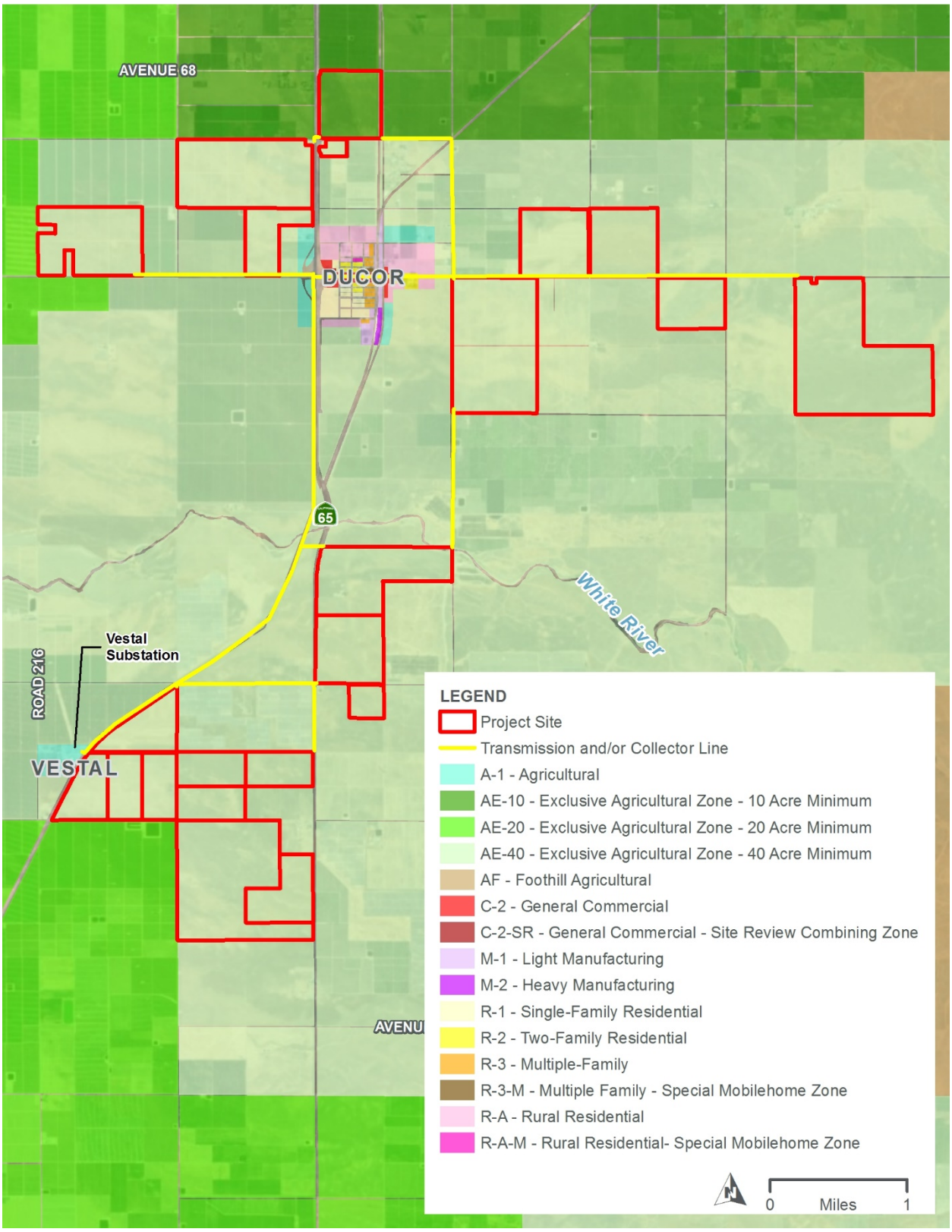
As previously mentioned above, the easternmost parcels (east of Road 248) (APN Nos. 321-210-004, 321-070-026, 323-040-006, -007, -008,) are located within the FGMP. As shown in **Figure 3.11-1,** the portion of the Project site located within the FGMP is designated as Valley Agriculture Extension and Extensive Agriculture. The Valley Agricultural Extension designation is for "Areas that would be considered a part of the FGMP where extension of the valley (small inlet-valleys, hollows, or other flat shallow inclusions into the foothills) warrants identifying the land as part of the valley."[7] The Extensive Agriculture designation is for "Areas in the foothills where development may not occur due to access constraints, emergency response time, slope, and other biological or archaeological factors that prohibit safe development."[8]

Zoning

As shown in **Figure 3.11-2**, the majority of the Project site is zoned as AE-40 (Exclusive Agriculture -40 acre minimum), with exception of the northernmost parcels (APN Nos. 321-040-007, -008, -011, and -025) which are zoned AE-10 (Exclusive Agriculture -10 acre minimum). These zoning districts are exclusive zones for intensive agricultural uses and for uses which are a necessary and integral part of an agricultural operation. The purpose of these zones is to protect the general welfare of the agricultural community and prevent the encroachment of non-agricultural uses.

6 Ibid (n 4). Page 3-29.
7 Ibid (n 5). Page 3-2.
8 Ibid.

Figure 3.11-2. Zoning Designations



3.11.5 Regulatory Setting

Local

Tulare County Association of Governments

"[The Tulare County Association of Governments] TCAG is committed to improving the quality of life for residents and visitors throughout Tulare County. We prove our commitment by addressing congestion using a preventative approach. We coordinate regional transit programs to make getting around easy and convenient. We have improved air quality and strive to continue to meet national standards. We responsibly use the extra hard earned tax dollars that the people of Tulare County bring in to us from the passage of Measure R under the supervision of the board and citizen's review committee. We address current and future rail needs and possibilities with a forward thinking approach. We gather important data which is used by the census and the public to properly forecast housing and transit needs. We also manage the abandoned vehicle program for the county, and do a whole lot more. We are thrilled to be a part of one of the largest agricultural centers in the world, and are preparing the region for forecasted growth predicted to make Tulare County the fastest growing region in California."[9]

Tulare County Association of Governments – 2018 Regional Transportation Plan

"The Regional Transportation Plan is a long range plan that every Metropolitan Planning Organization (MPO) is required to complete. The plan is meant to provide a long-range, fiscally constrained guide for the future of Tulare County's transportation system. The long range plan extends to the year 2042 in its scope. The plan accomplishes its goals by forecasting future growth, identifying regional priorities, and planning for infrastructure improvements."[10]

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

AG-2.11 Energy Production. The County shall encourage and support the development of new agricultural related industries featuring alternative energy, utilization of agricultural waste, and solar or wind farms.

ERM-4.6 Renewable Energy. The County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind, solar, bio-fuels and co-generation.

[9] Tulare County Association of Governments Website. About Us. https://tularecog.org/tcag/about-us/. Accessed March 2020.

[10] Tulare County Association of Governments. Regional transportation Plan 2018. https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/. Accessed March 2020.

3.11.6 Impact Evaluation

Would the Project:

a) Physically divide an established community?

Project Impact Analysis: ***No Impact***

The Project site consists of 40 discontiguous parcels encompassing approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. The Project area is undeveloped near predominantly agricultural land and with no substantial residential developments. The nearest area in the Project vicinity with reasonable urbanization (residential and commercial uses) is along Avenue 56 between Road 232 and Road 236 in Ducor.

Generally, the physical division of an established community will occur as a result of the construction of a physical feature (such as a highway or railroad tracks), or the removal of a means of access (such as a local road or bridge) which will impair mobility within an existing community or between a community and outlying areas.

The proposed Project will include the construction and installation of a gen-tie/collector line along Avenue 56 where existing residences and commercial uses are present to the north and south of the road. However, the Project will not require closures of public roads, which could inhibit vehicular access. The proposed Project does not include the construction of a major highway, railroad track, or other linear physical feature that will divide an existing community. As such, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project does not include the construction of a major highway, railroad track, or other linear physical feature that will divide an existing community. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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?

Project Impact Analysis: ***Less than Significant Impact***

The proposed Project involves the construction and operation of an up to 700 megawatt (MW) solar facility, including an energy storage system (ESS) with up to 700 MW storage capacity. The proposed Project will be consistent with applicable goals and policies of the Tulare County General Plan. Specifically, the proposed Project will be consistent with Policies AG-2.11 (Energy Production) and ERM-4.6 (Renewable Energy) because implementation of the proposed Project

will allow the construction and operation of a solar energy facility capable of producing up to 700 MW of renewable energy.

The proposed Project will be developed on property zoned AE-10 (Exclusive Agriculture – 10 acre minimum) and AE-40 (Exclusive Agriculture -40 acre minimum), in which photovoltaic facilities are a permitted use subject to approval of a Special Use Permit and Developer Agreement. The Zoning Ordinance requires that a Special Use Permit be obtained prior to the establishment of non-agricultural uses on agriculturally-zoned lands. The Tulare County Board of Supervisors (BOS) has adopted a number of resolutions that allow photovoltaic facilities on designated agricultural lands. The following resolutions permit photovoltaic facilities on designated agricultural lands given the Project applicant obtains a Special Use Permit and meets the application requirements:

- Resolution No. 89-1275 Uniform Rules for Agricultural Preserves;
- Resolution No. 99-0620 Establishing Rules on Farmland Security Zones;
- Resolution No. 2010-0458 Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities County Wide;
- Resolution No. 2010-0590 Amendment to Resolution Interpretation to Tulare County Zoning Ordinance No. 352;
- Resolution No. 2010-0591 Compatibility for Public and Private Utility Structures Located on Agricultural Zoned Lands and Lands Under Williamson Act Contracts;
- Resolution No. 2010-0717 Establishing Criteria for Public and Private Utility Structures Proposed on Agricultural Zoned Lands and Lands Under Williamson Act Contracts; and,
- Resolution No. 2013-0104 Recommendation from the Agricultural Policy Advisory Committee Regarding Siting of Utility Scale Solar Facilities.

Through the approval of a Special Use Permit, the proposed Project will be consistent with agricultural zoning designations. The Project will not conflict with existing land use designations/zoning and will comply with the guidelines and policies set forth in the Tulare County General Plan, Tulare County Code, and BOS Resolutions that govern the approval of solar facilities. The Project will be compatible with all relevant land use plans, policies, and regulations and impacts, and as such, will be ***Less than Significant***.

Cumulative Impact Analysis: ***Less than Significant***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the proposed Project will not conflict with any applicable land use plans, policies, and regulations. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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3.12 Mineral Resources

3.12.1 Summary of Findings

The proposed Project will result in ***No Impacts*** related to Mineral Resources, as the proposed Project site is not located near a known mineral resource area. No mitigation measures will be required. A detailed review of potential impacts is provided in the following analysis.

3.12.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Mineral Resources. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting section provides a description of the Mineral Resources in the County. The Regulatory Setting section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines. Section 15126.2 (a).

CEQA Thresholds of Significance

The Tulare County General Plan 2030 Update identifies known Mineral Resource areas.[2] The thresholds of significance for this section includes the following:

- Impact a known Mineral Resource
- Site located in a Mineral Resource Zone area (as noted in the General Plan)

3.12.3 Environmental Setting

"There is estimated to be a total of 932 million tons of aggregate resources in Tulare County. This figure includes 219 million tons of reserves available for mining and 200 million tons that are located in the hard rock quarries southeast of Porterville. Of that total, 19 million tons are located in Northern Tulare County, which is expected to be depleted by the year 2010 unless new resources are permitted for mining. Lemon Cove has been the most highly extracted area for PCC quality aggregate supplies."[3]

"Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur... The majority of these activities appear to occur in the Sierra Foothill Area."[4]

"The following MRZ categories are used by the State Geologist in classifying the State's lands. The geologic and economic data and the arguments upon which each unit MRZ assignment is based are presented in the mineral land classification report transmitted by the State Geologist to the SMGB…

A. MRZ-1 – Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone is applied where well developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight.

B. MRZ-2a – Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. As shown on the diagram of the California Mineral Land Classification System, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.

C. MRZ-2b – Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered

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[2] Tulare County General Plan 2030 Update Background Report. Figure 10-1. Page 10-19. http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/BackgroundReport.pdf

[3] Ibid. Page 10-18.

[4] Op. Cit. Page 10-17.

deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exists or where there is an exposure of mineralization of economic importance.

D. MRZ-3a – Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. As shown on the diagram of the California Mineral Land Classification System, MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of a MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.

E. MRZ-3b – Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ-3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An example of a MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure which indicates the possible presence of a mineral deposit or that an ore-forming process was operative.

F. MRZ-4 – Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories."[5]

[5] California Department of Conservation, Division of Mines and Geology, "Guidelines for Classification and Designation of Mineral Lands." Pages 4 thru 6. Accessed at: http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf. Accessed February 2020.

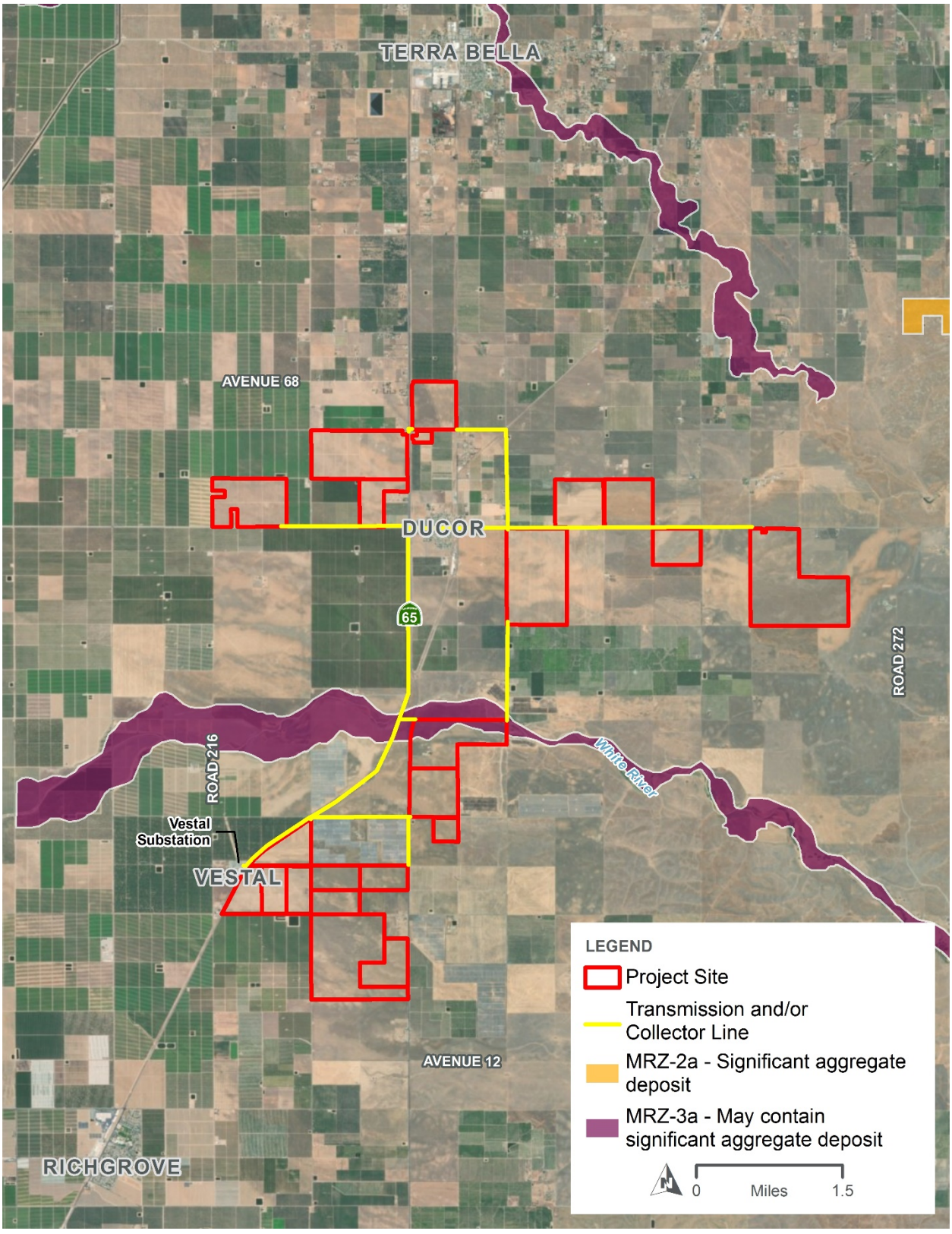
3.12.4 Existing Conditions

As shown on **Figure 3.12-1**, a portion of the Project site (APN No. 339-050-004) is located immediately adjacent to the White River. The White River is mapped as MRZ-3a, which are areas considered to have a moderate potential for the discovery of economic mineral deposits.

According to U.S. Geological Survey, the nearest active mine and mineral production plant to the proposed Project is Fountain Springs (operated by International Slurry Seal, Inc.) located approximately 4.15 miles northeast of the Project site within Tulare County.[6] The mine facility is located north of Avenue 56 and east of Old Stage Road, near the Sierra Mountains foothills. International Slurry Seal, Inc. is both a mine and mineral production plant. The facility generally produces crushed stone, sand and gravel materials. The International Slurry Seal, Inc. mine site is identified by U.S. Geological Survey Record ID, 815.

[6] USGS Mineral Resources On-Line Spatial Data, Active mines and mineral plants in the US. http://mrdata.usgs.gov/mineral-resources/activemines.html. Accessed February 2020.

Figure 3.12-1. Mineral Resource Zones



3.12.5 Regulatory Setting

State

Surface Mining and Reclamation Act of 1975 (SMARA)

"The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act, (Government Code) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state's mineral resources. Public Resources Code Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations."[7]

State Mining and Geology Board (SMGB)

"The SMGB serves as a regulatory, policy, and appeals body representing the State's interests in geology, geologic and seismologic hazards, conservation of mineral resources and reclamation of lands following surface mining activities. The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act."[8]

Division [Office] of Mine Reclamation (OMR)

In 1991, following significant revisions to SMARA, the OMR was created to provide a measure of oversight for local governments as they administer SMARA within their respective jurisdictions. To accomplish this goal, the OMR may provide comments to lead agencies on a mining operation's reclamation plan and financial assurance and may initiate compliance actions that encourage SMARA compliance. While the primary focus is on existing mining operations and the return of those mined lands to a usable and safe condition, issues relating to abandoned legacy mines are addressed through the Abandoned Mine Lands program.[9]

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[7] SMARA Description, http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx

[8] State Mining & Geology Board (SMGB), http://www.conservation.ca.gov/smgb/Pages/Index.aspx

[9] Office of Mine Regulation, http://www.conservation.ca.gov/OMR/Pages/Index.aspx

Local

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

ERM-2.1 Conserve Mineral Deposits. The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.

ERM-2.3 Future Resource Development. The County will provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County.

ERM-2.10 Incompatible Development. Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.

ERM-4.6 Renewable Energy. Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.

3.12.6 Impact Evaluation

Would the Project:

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?

Project Impact Analysis: ***No Impact***

Mineral resources located in south Tulare County are predominantly sand and gravel resources near waterways. A portion of the Project site (APN No. 339-050-004) is located immediately adjacent to the White River. The White River is mapped as MRZ-3a, which are areas considered to have a moderate potential for the discovery of economic mineral deposits. As shown on **Figure 3.12-1**, the northern portion of APN No. 339-050-004 encroaches into the MRZ-3a zone. This area is not currently actively mined and therefore the proposed Project will not result in an impact to existing or planned aggregate mining operations, and will in turn, not result in the loss of availability of aggregate resources. Further, the proposed Project involves the construction and operation of a solar energy facility and associated infrastructure and will not involve the extraction of mineral resources. Furthermore, decommissioning of the Project will remove all of the structural components on the Project site, thereby making the land available for future exploration or production of aggregate materials. Based on these considerations, the proposed Project will not result in the loss of availability of a known mineral resource and ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As described above, the proposed Project does not include mining operations and will not result in the loss of availability of a known mineral resource. ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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?

Project Impact Analysis: ***No Impact***

As discussed above, the proposed Project does not include a mining operation and will not result in the loss of availability of a known mineral resource. There will be no significant loss of local important mineral resource recovery site. According to U.S. Geological Survey, the nearest active mine and mineral production plant to the proposed Project is Fountain Springs (operated by International Slurry Seal, Inc.) located approximately 4.15 miles northeast of the Project site within Tulare County.[10] The proposed Project will result in ***No Impact*** related to this resource.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As described above, the proposed Project does not include a mining operation and is not located within a mineral resource zone. As such, ***No Cumulative Impacts*** related to this resource will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

[10] USGS Mineral Resources On-Line Spatial Data, Active mines and mineral plants in the US. http://mrdata.usgs.gov/mineral-resources/activemines.html. Accessed February 2020.

3.13 Noise

3.13.1 Summary of Findings

The proposed Project will result in ***Less than Significant Impacts*** related to Noise. The impact analyses and determinations in this section are based upon information obtained from the "*Rexford Solar Farm Project Noise Study"* prepared by Rincon Consultants, Inc., provided in Appendix "I" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.13.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts related to noise. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting section provides a description of the noise setting in Tulare County. The Regulatory Setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed project is also provided and includes the identification of feasible mitigation (if necessary and feasible) to avoid or lessen the impacts.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

- Exceed Tulare County Standards for Noise Levels

[1] CEQA Guidelines, Section 15126.2 (a).

- Expose people to excessive ground-borne vibration
- Expose people to excessive airport/airstrip noise

Overview of Sound Measurement

"Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment.

In technical terms, sound levels are described as either a "sound power level" or a "sound pressure level," which while easily confused are two distinct characteristics of sound. Both share the same unit of measure, the decibel (dB). However, the sound power level, expressed as L_w, is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave in the air that exerts pressure on receivers such as an eardrum or microphone, the SPL. Sound measurement instruments only measure SPL, and limits used in standards are generally SPL. Modeling uses the L_w of equipment to calculate the SPL at a distance.

Noise levels are commonly measured in dB using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease.

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud ([10.5x the sound energy].

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance. The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver. Structures can

substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of Project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period.

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The relationship between the peak-hour L_{eq} value and the L_{dn} depends on the distribution of traffic during the day, evening, and night."[2]

3.13.3 Environmental Setting

"Noise in the community has often been cited as being a health problem, not in terms of actual damage such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being are the bases for land use planning policies preventing exposure to excessive community noise levels."[3]

"Noise sources are commonly grouped into two major categories: transportation and non-transportation noise sources. Transportation noise sources include surface traffic on public roadways, railroad line operations, and aircraft in flight. Non-transportation (or fixed), noise sources, commonly consist of industrial activities, railroad yard activities, small mechanical devices (lawnmowers, leaf blowers, air conditioners, radios, etc.), and other sources not included in the traffic, railroad and aircraft category."[4]

"Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be expected, the quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources."[5]

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[2] "*Rexford Solar Farm Project Noise Study*." Pages 5-6. Prepared by Rincon Consultants, Inc. and included in Appendix "I" of this EIR.

[3] Tulare County Association of Governments (TCAG), *2011 Regional Transportation Plan: Draft Subsequent EIR*. Page 151.

[4] Ibid. Page 153.

[5] Tulare County General Plan 2030 Update, Background Report. February 2010. Page 8-77.

3.13.4 Existing Conditions

Existing Noise

The Project site is located in a rural agricultural environment with mostly agricultural uses, and a small cluster of single-family residences and commercial uses in the community of Ducor. The majority of the Project site is bisected by and lies east of State Route (SR) 65. Project parcels are also located east of Richgrove Drive and bisected by Avenue 56. The primary sources of noise on-site and in the surrounding area include motor vehicles, wind, and agricultural activities (e.g., farming equipment). The greatest vehicle noise occurs from vehicles on the main thoroughfares (SR 65 and Avenue 56).

Noise measurements were taken at four locations near the Project site to determine existing noise levels in the area. **Figure 3.13-1** shows the locations of the noise measurements. The noise measurement locations were chosen to provide a representative range of ambient noise levels across the Project site and in the nearby area, especially near existing noise-sensitive residences and roadways. The short-term noise measurement results are shown in **Table 3.13-1**.

Table 3.13-1. Noise Monitoring Results in the Project Site Vicinity[6]

Measurement Number	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Noise Level (dBA L_{eq})[1]
1	In between SR 65 and Road 232	2:07 PM – 2:22 PM	90 feet from centerline of SR 65	67
2	Avenue 56 and Road 236 intersection (Ducor)	1:09 PM – 1:24 PM	80 feet from centerline of Avenue 56	63
3	Road 240, near Avenue 48 intersection	1:34 PM – 1:49 PM	45 feet from centerline of from centerline of Phillips Road	35
4	Richgrove Drive and Avenue 24 intersection	12:31 PM – 12:46 PM	65 feet from centerline of Richgrove Drive	67

[1] The equivalent noise level (L_{eq}) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For these measurements, the L_{eq} was over a 15-minute period.

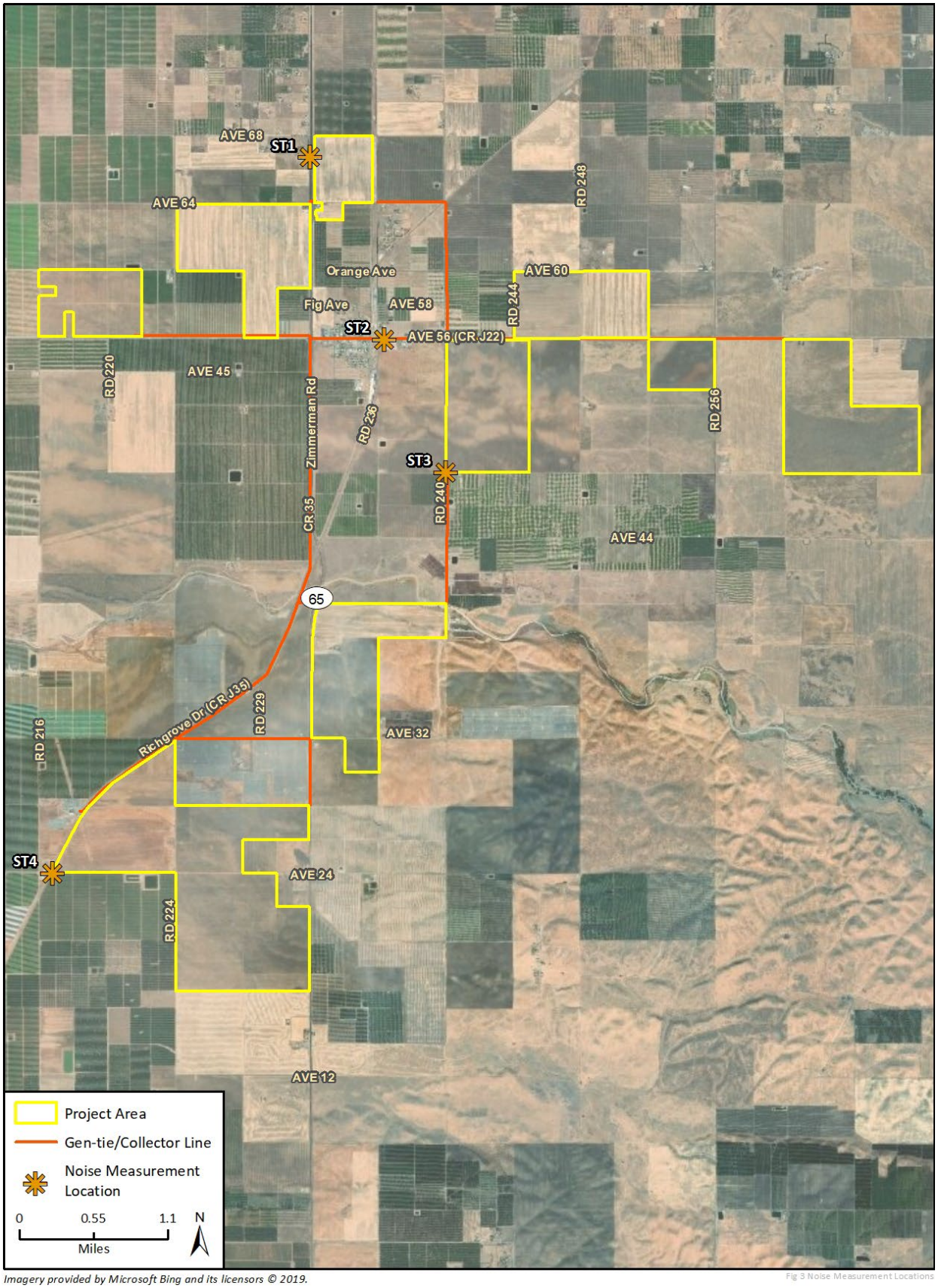
Sensitive Receptors

As shown on **Figure 3.13-2**, nearby noise-sensitive receivers are single-family residences located in the community of Ducor. Ducor is located in the approximate middle of the northern Project parcels.

The nearest residences in Ducor are located near the potential gen-tie route for the Project, which may go directly through Ducor along Avenue 56. The nearest residentially-zoned properties from the Project parcels include the undeveloped property in the northwest corner of Ducor, located approximately 250 feet southwest of Project parcels, and the undeveloped property in the southeast corner of Ducor, located approximately 750 feet west of Project parcels. The nearest single-family residence on an agriculturally-zoned property is a residence north of Avenue 60.

[6] "*Rexford Solar Farm Project Noise Study*." Page 7. Prepared by Rincon Consultants, Inc. and included in Appendix "I" of this EIR.

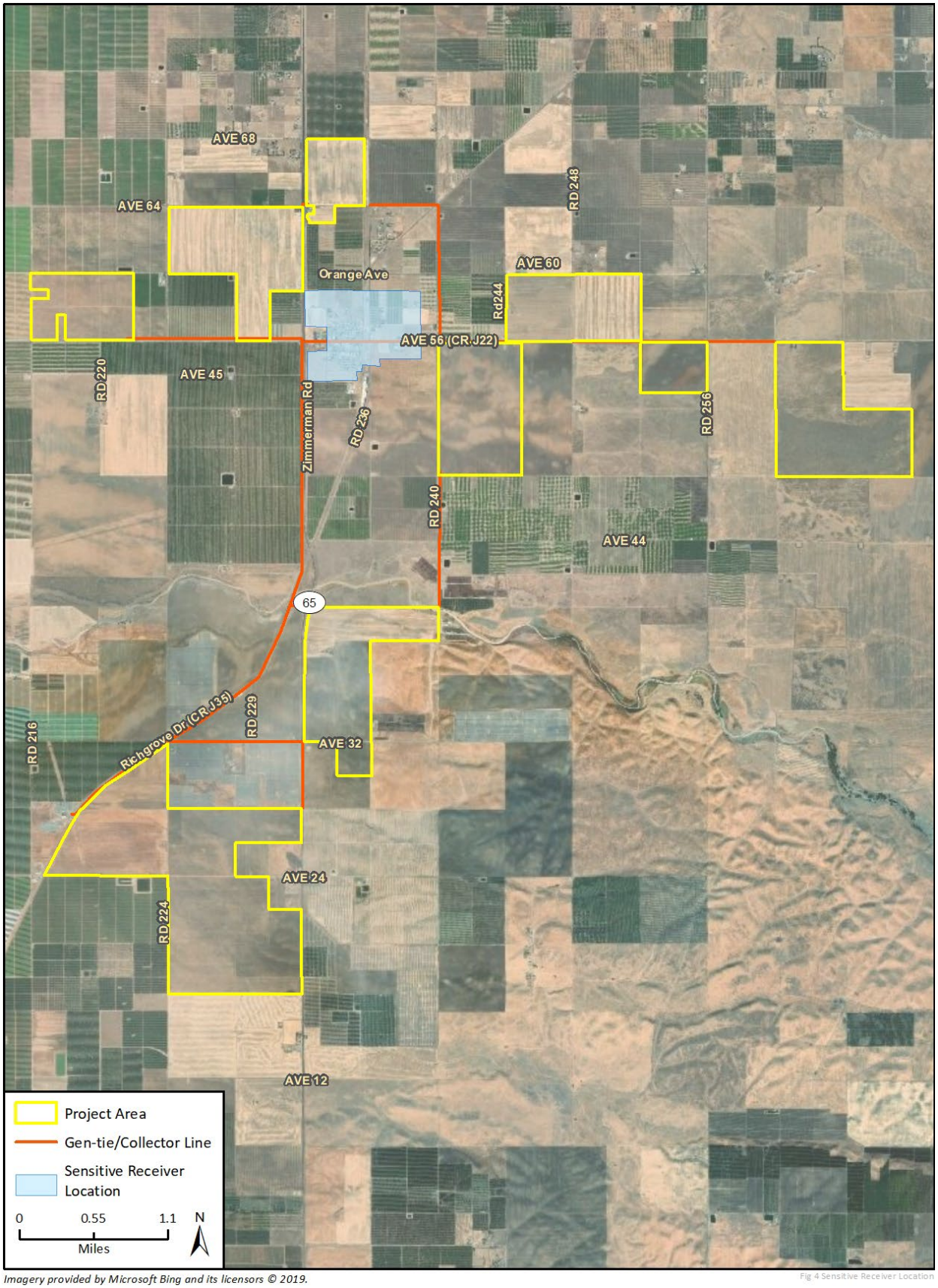
Figure 3.13-1. Noise Measurement Locations



Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 3 Noise Measurement Locations

Figure 3.13-2. Sensitive Receptors



Airports

The Project site is not located within area covered by an airport land use plan or within two miles of a public airport or public use airport. The Porterville Municipal Airport is located approximately 7.6 miles north of the Project site. The San Joaquin Sprayers Incorporated Heliport is located approximately 6.12 miles southwest of the Project site.

3.13.5 Regulatory Setting

Federal

Federal Highways Administration Highway Traffic Noise Prediction Methodology

"In March 1998, the Federal Highway Administration (FHWA) released the Traffic Noise Model, Version 1.0 (FHWA TNM®). It was developed as a means for aiding compliance with policies and procedures under FHWA regulations. Since its release in March 1998, Version 1.0a was released in March 1999, Version 1.0b in August 1999, Version 1.1 in September 2000, Version 2.0 in June 2002, Version 2.1 in March 2003 and the current version, Version 2.5 in April 2004. The FHWA TNM is an entirely new, state-of-the-art computer program used for predicting noise impacts in the vicinity of highways. It uses advances in personal computer hardware and software to improve upon the accuracy and ease of modeling highway noise, including the design of effective, cost-efficient highway noise barriers."[7]

Federal Railway Administration and the Federal Transit Administration

"The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to groundborne vibration levels of 0.5 Peak Particle Velocity (PPV) without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 VdB."[8]

State

California Noise Insulation Standards

"The California Noise Insulation Standards found in the California Code of Regulations, Title 24, set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is DNL 45 dB in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB."[9]

[7] U.S. Department of Transportation. Federal Highway Administration website, Traffic Noise Model, http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/. Accessed February 2020.

[8] Tulare County Association of Governments 2018 Regional Transportation Plan/Sustainable Communities Draft EIR. Page 4.8-17.

[9] Ibid. Page 4.8-21.

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below. The maximum acceptable ambient noise exposures for various land uses within Tulare County are depicted in **Table 3.13-2**.

HS-8.2 Noise Impacted Areas. The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB L_{dn} (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

HS-8.8 Adjacent Uses. New development of industrial, commercial or other noise-generating land uses will not be permitted if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas planned and zoned for residential or other noise-sensitive land uses, unless determined to be necessary to promote public health, safety and welfare to the County.

HS-8.11 Peak Noise Generators. The County shall limit noise generating activities, such as construction, to hours of normal business operation (7:00 AM to 7:00 PM). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.18 Construction Noise. The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7:00 AM to 7:00 PM, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control. The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise impacts on surrounding land uses.

Table 3.13-2. Tulare County Maximum Acceptable Ambient Noise Exposure for Various Land Uses[10]

Land Use	Suggested Maximum Ldn
Residential – low density	60
Residential – high density	65
Transient lodging	65
Schools, libraries, churches, hospitals	65
Playgrounds, parks	65
Commercial	70
Industrial	75

[10] Tulare County 2030 General Plan Update Background Report. Page 8-50.

3.13.6 Impact Evaluation

Would the Project:

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 a local general plan or noise ordinance or applicable standards of other agencies?

Project Impact Analysis: ***Less than Significant Impact***

Construction and Decommissioning

Construction of the Project will involve the use of noise-generating equipment during various phases, including transport of personnel and materials to the site, heavy machinery used in grading and clearing the site, pneumatic post drivers to install foundation supports for solar array modules, as well as equipment used during construction of the solar arrays, infrastructure improvements, and related structures. Emergency diesel generators may be used during construction-related activities. Project components at all Project parcels and the gen-tie are anticipated to be constructed over a 12- to 24-month period.

Noise-sensitive receivers near Project construction-related areas include scattered, rural single-family residences in non-urbanized areas of Tulare County and single-family residences in the community of Ducor. These land uses will experience short-term, temporary, and intermittent increases in noise during construction of the Project. The following details the potential impacts to noise-sensitive receivers in proximity to the Project parcels and the gen-tie corridor.

As Tulare County does not specify quantitative construction noise limits, for purposes of this analysis, the FTA Transit Noise and Vibration Impact Assessment (FTA 2018) criteria is used. For residentially-zoned uses, the daytime noise threshold is 80 dBA Leq for an 8-hour period.

Construction at Project Parcels. Table 3.13-3 shows the estimated average noise level from construction at the Project parcels at the nearest noise-sensitive land uses using FHWA's Roadway Construction Noise Model.

Table 3.13-3. Noise Levels at Various Distances from Construction at the Project Parcels[11]

Receiver	Distance from Construction (feet)[1]	Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	82
Single-family residence on agriculturally-zoned property of Avenue 60	150	75
Single-family residentially- zoned property off SR-65	300	69
Single-family residentially-zoned property off Avenue 56	800	61

[1] Distances include the distance from the Project parcel boundary to the receivers, plus 50 feet to account for construction equipment that be mobile throughout the day and would average a further distance (of approximately 50 feet) from the property line over a typical construction day.

[11] "*Rexford Solar Farm Project Noise Study*." Page 18. Prepared by Rincon Consultants, Inc. and included in Appendix "I" of this EIR.

As shown in **Table 3.13-3**, although construction-related noise levels from simultaneous heavy equipment operation will reach 82 dBA Leq at the reference distance of 50 feet, due to the further distance between construction at the Project parcels and the nearest noise-sensitive receivers, construction noise levels under the conservative scenario analyzed will be limited to 75 dBA Leq. This is below FTA's construction noise threshold of 80 dBA Leq (8-hour). Heavy construction-related activity involving pneumatic tools and graders also will be limited to daylight hours and will not occur during nighttime hours.

Pursuant to Policy HS-8.18 of the Tulare County General Plan, construction-related activities are limited to the hours of 7:00 AM to 7:00 PM, Monday through Saturday when construction-related activities are located near sensitive receptors. No construction-related activities shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors. In accordance with the requirements of Policy HS-8.18, the Project will obtain a permit to conduct construction-related work outside of the allowed hours (7:00 AM to 7:00 PM, Monday through Saturday). Compliance with the construction hours and permit requirements specified in Policy HS-8.18 will result in ***Less than Significant*** noise impacts during construction-related activities.

Gen-Tie Construction. The gen-tie corridor may be routed along Avenue 56, the thoroughfare that bisects the community of Ducor. For the purposes of this analysis, at the nearest point of construction, the gen-tie routes will be located approximately 50 feet from single-family residences. As modeled, the loudest anticipated construction-related noise from gen-tie construction could potentially involve the simultaneous use of an excavator and a crane.

Simultaneous heavy equipment use during gen-tie construction-related activities could generate a noise level of up to 78 dBA L_{eq} when within 50 feet of single-family residences in Ducor. This is below FTA's construction noise threshold of 80 dBA L_{eq} (8-hour). Most gen-tie construction-related activities will occur further than 50 feet from nearby noise receptors, and will, therefore, result in lower noise impacts to noise receptors. As noted earlier, heavy construction-related activities will not occur during nighttime hours.

Compliance with the construction hours and permit requirements specified in Policy HS-8.18 will result in ***Less than Significant*** noise impacts during construction-related activities.

Project Decommissioning. At the end of the Project's useful life (anticipated to be 30-40 years), the solar facility and associated infrastructure may be decommissioned in accordance with then-current decommissioning practices. It is anticipated that decommissioning-related activities will be similar to Project construction-related activities. Assuming that the facility will be torn down and the Project materials recycled or disposed, temporary, short-term, and intermittent noise associated with such actions are assumed to be generally similar to the noise levels that will result from Project construction-related activities and will not exceed FTA's construction noise threshold of 80 dBA Leq (8-hour). Similar to the noise generated during construction-related activities of the Project, decommissioning-related activities will be conducted in accordance with all applicable requirements in effect at the time of Project termination. Therefore, decommissioning-related impacts will be ***Less than Significant***.

Cumulative Construction Noise. Project components will be constructed over a 12- to 24-month period. This analysis makes a conservative assumption that construction-related activities at all Project parcels and the gen-tie will occur simultaneously. Concurrent construction activity at more than one parcel and the gen-tie line may expose nearby residences to cumulative noise impacts. This analysis of cumulative effects focuses on the effects of concurrent construction activities for

the worst-case scenario (i.e., the nearest residences which will be exposed to construction activities at multiple sites).

Some noise-sensitive receivers located in Ducor will be exposed to adjacent construction-related noise from gen-tie construction and more distant construction-related noise from Project parcels. Because of these residences proximity to gen-tie construction (as near as 50 feet), cumulative noise levels will be predominantly from gen-tie construction-related noise. The residence at 5651 Road 240 is the nearest noise-sensitive receiver within 50 feet of gen-tie-related construction activities that is also nearest to construction of the solar arrays on Project parcels. These parcels are located at a distance of 475, 2,850, and 5,400 feet from the residence at 5651 Road 240. . This residence is representative of a reasonable conservative scenario for combined Project construction-related noise impacts, assuming concurrent construction of gen-tie corridor and the nearest Project parcels. **Table 3.13-4** estimates the cumulative construction noise levels for this scenario, which could reach approximately 78 dBA L_{eq}. This would be below FTA's construction noise threshold of 80 dBA L_{eq} (8-hour).

As such, compliance with the construction hours and permit requirements specified in Policy HS-8.18 will result in ***Less than Significant*** noise impacts during construction-related activities.

It is anticipated that concurrent decommissioning-related activities will be similar to concurrent Project construction-related activities. Noise associated with such actions are assumed to be generally similar to the noise levels that will result from concurrent Project construction-related activities and will not exceed FTA's construction noise threshold of 80 dBA Leq (8-hour). Similar to the noise generated during construction-related activities of the Project, decommissioning-related activities will be conducted in accordance with all applicable requirements in effect at the time of Project termination. Therefore, decommissioning-related impacts will be ***Less than Significant***.

Table 3.13-4. Cumulative Construction Noise Levels for Worst-Case Scenario[12]

Project Site	Distance from Construction (feet)	Noise Level at Receptor (dBA L_{eq})
Gen-tie	50	78
Project Parcel	475	65
Project Parcel	2,850	50
Project Parcel	5,400	44
Cumulative Noise Level		**78**

Construction Traffic Noise

Construction of the Project is anticipated to increase traffic noise offsite from commuting construction-related workers and from haul trucks bringing materials to and from the Project site. Project components will be constructed simultaneously over a 12- to 24-month period. This could expose nearby residences to cumulative noise from construction-related traffic. This analysis of cumulative effects focuses on the effects of concurrent construction-related traffic for the worst-case scenario (i.e., traffic generated by the peak construction period). **Table 3.13-5** shows

[12] Ibid. Page 20.

modeled traffic-related noise levels at the nearest receivers under existing traffic conditions and with construction-related traffic.

As shown in **Table 3.13-5**, construction-related traffic will increase noise levels by up to 4 dBA Leq at the nearest sensitive receivers. However, none of the traffic-related noise increases will exceed the applicable FTA criteria. Therefore, the short-term increase in traffic-related noise from Project construction will be ***Less than Significant***.

Table 3.13-5. Construction Traffic Noise[13]

Roadway	Nearest Sensitive Receiver	Distance from Roadway Centerline to Nearest Sensitive Receiver (feet)	Existing Traffic Noise (dBA L_{eq})	With-Construction Traffic Noise (dBA L_{eq})	Change in Traffic Noise (dBA L_{eq})	FTA Allowable Noise Exposure Increase (dBA L_{eq})
Avenue 56	Single-family residence	50	57	60	3	3
Road 236	Single-family residence	80	52	56	4	5
SR 65 (near Terra Bella)	Single-family residence	150	57	59	2	3

On-Site Operational Noise

Solar Arrays. Sensitive receivers nearby the Project parcels include single-family residences in Ducor and rural single-family residences associated with agricultural properties. Noise levels from the Project's solar array operations (i.e., transformers and HVAC units associated with the inverters) are shown in **Table 3.13-6**, and noise level contours and receivers are shown in **Figure 3.13-3**. As shown in **Table 3.13-6**, operational noise levels are anticipated to reach up to 58 dBA L_{dn} at noise-sensitive land uses.[14] These noise levels will be below Tulare County's standard of 60 dBA L_{dn} for noise at noise-sensitive land uses. Therefore, operational noise impacts from solar array operations will be ***Less than Significant***.

[13] Ibid. Page 21.

[14] Ibid.

Table 3.13-6. Operational Noise at Nearest Sensitive Receivers[15]

Receiver	Receiver Description	Noise Level at Receiver		Exceed Threshold?
		dBA Leq	dBA Ldn	
R1	Residence on agriculturally-zoned property	47	53	No
R2	Residence on agriculturally-zoned property	45	51	No
R3	Residence in Ducor on residentially-zoned property	46	53	No
R4	Central Ducor	41	47	No
R5	Residence in Ducor on residentially-zoned property	46	52	No
R6	Residence on agriculturally-zoned property	52	58	No
R7	Residence on agriculturally-zoned property	50	56	No
R8	Residence on agriculturally-zoned property	47	53	No

Gen-Tie. The gen-tie transmission line will generate noise from the corona affect, which is a phenomenon associated with the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware due to very high electric field strength. This is audible power line noise that is generated from electric corona discharge, which is usually experienced as a random crackling or hissing sound. The corona effect on the gen-tie transmission line will generate a noise level of approximately 20 dBA at a distance of 50 feet.[16] This is the approximate distance to the nearest residences from the gen-tie route. As observed during a site visit to existing solar farms in Kern County on September 19, 2019 by Bill Vosti, a Rincon Consultants, Inc. qualified noise expert, noise levels from these transmission lines were not detected over the existing ambient noise sources in the area (wind and vehicles) just outside of the solar farm properties. Therefore, per site observations and the general low noise of transmissions lines, gen-tie noise will not exceed County's standard of 60 dBA L_{dn} at the nearest residences, and impacts will be ***Less than Significant***.

PV Panels. PV panel noise will come from the tracking motors. While these motors may generate noise of up to 44 dBA at 50 feet, these motors will operate briefly throughout an hour (e.g., several minutes per hour) as the sun moves west across the sky, and then will reset at night to face the eastern sky.[17] For example, tracking motors operating for five minutes out of an hour will result in an hourly noise level of 33 dBA at 50 feet. Therefore, by operating only several minutes per hour, the hourly noise level will be negligible at the nearest sensitive receivers. In addition, as observed during a site visit to existing solar farms in Kern County on September 19, 2019 by Bill Vosti, a Rincon Consultants, Inc. qualified noise expert, noise levels from PV panel tracking were not detected over existing ambient noise sources such as wind, vehicles, planes, and trains just outside of the observed solar farm properties, which are similar in layout and construction to the proposed Project. Therefore, noise levels from the PV panels will be ***Less than Significant***.

[15] Ibid.

[16] Ibid. Page 23.

[17] Ibid.

Figure 3.13-3. Receiver Locations and Operational Noise Contours

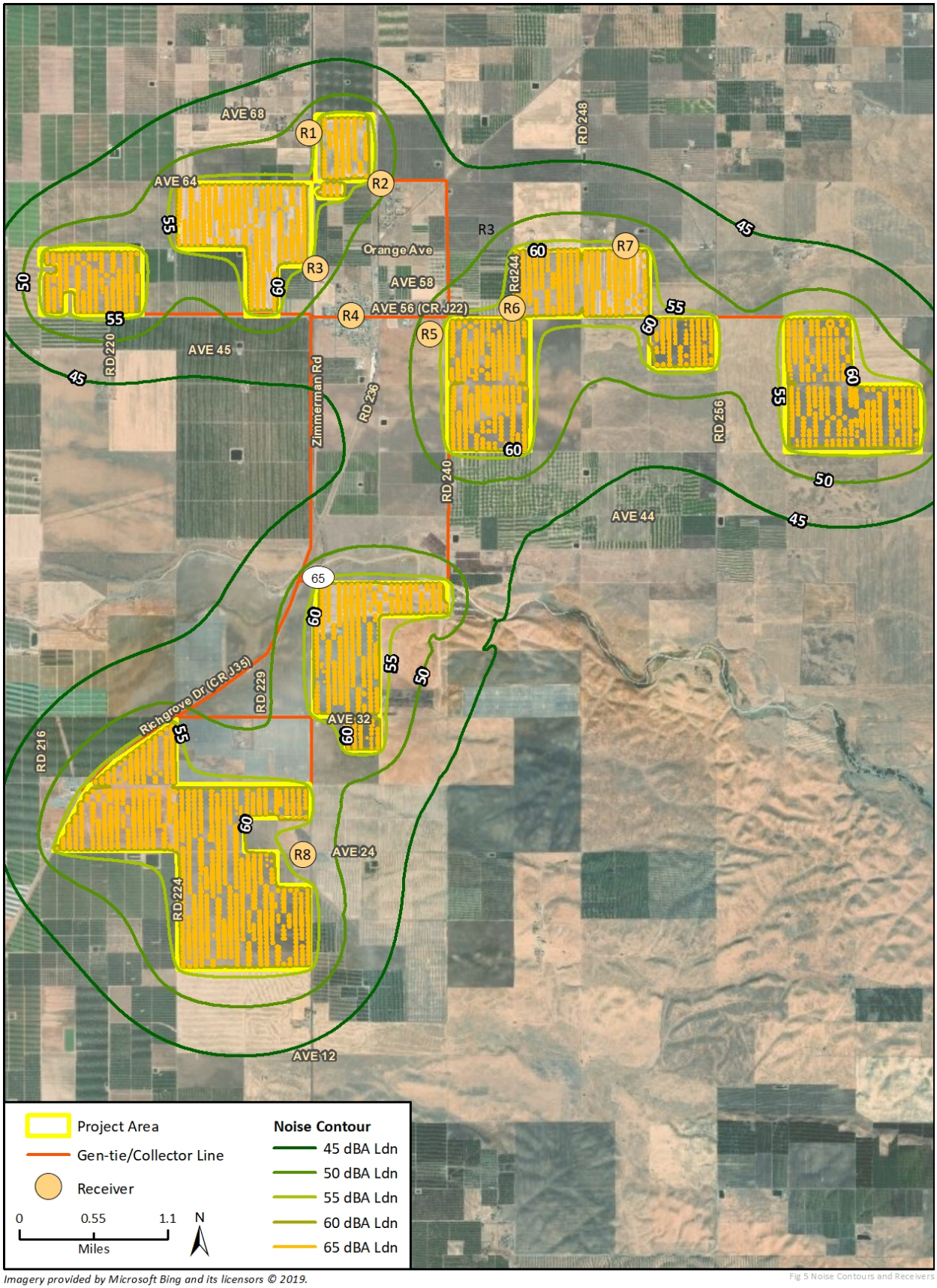


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Fig 5 Noise Contours and Receivers

Substation/Energy Storage System. Potential noise generators from a substation or energy storage system may include HVAC units to cool equipment. Exact locations of the substation and energy storage systems are unknown at this stage of planning. The modeling conducted for the transformers and inverters with HVAC units analyzed above under "Solar Arrays" assumed coverage of the entire Project parcels with equipment, representing hundreds of units per parcel. In the model, the solar array equipment was overlaid on potential areas where a substation or energy storage system may be located. This will represent a similar density of equipment and HVAC units to the units that will be located on a substation or energy storage system. As shown under "Solar Arrays", noise levels from this density of equipment, which will represent hundreds of units on a parcel compared to units located on one building, did not exceed Tulare County noise standards. In addition, as observed during a site visit to existing solar farms in Kern County on September 19, 2019 by Bill Vosti, a Rincon Consultants, Inc. qualified noise expert, noise levels from substations and energy storage systems were not detected over existing ambient noise sources in the area such as wind, vehicles, planes, and trains just outside of the observed solar farm properties, which are similar in layout and construction to the proposed Project. Therefore, noise levels from the substation/energy storage system will be ***Less than Significant***.

Operational Traffic Noise

Once construction-related activities of the Project are complete, vehicle trips to the Project site will be associated with operations and maintenance of the solar facility. In addition, the Project will require occasional nighttime activities, including deliveries, repairs, maintenance, office and administrative activities, security personnel, and emergency response.

As shown in **Table 3.13-5**, existing roadways will generate noise levels of 52 to 57 dBA L_{eq} to the nearest single-family residences. With the anticipated increase in traffic volumes from Project operation (88 trips), Project operation will increase noise by less than 1 dBA on each roadway.[18] This increase will be imperceptible to the nearest residents and will not exceed applicable FTA criteria. Therefore, the Project's noise increases from operational traffic will have a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

As discussed above, implementation of the proposed Project will not result in a substantial increase in ambient noise levels as a result of construction- and decommissioning-related activities, construction-related traffic, on-site stationary sources, and operational traffic. As a result, the proposed Project will not result in a cumulative contribution to noise levels that will adversely affect nearby land uses. Therefore, the Project will result in a ***Less than Significant Impact***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As described above, ***Less than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

[18] Ibid. Page 24.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Project Impact Analysis: ***Less than Significant Impact***

Construction at Project Parcels. Construction at the Project parcels may require post driving and has the potential to result in temporary, short-term, and intermittent vibration impacts on structures and humans. Based on the potential site locations, post driving activities could occur within 150 feet of the nearest off-site residential structure.

The PPV at the nearest residential structure is calculated to be 0.024 in./sec. PPV, which is below the Caltrans continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.3 in./sec. PPV and the strongly perceptible human annoyance threshold of 0.10 in./sec. PPV.[19] Therefore, vibration impacts associated with construction-related activities of the proposed Project will be ***Less than Significant***.

Gen-Tie Construction. Gen-tie construction may require the use of an auger drill rig that has the potential to result in temporary, short-term, and intermittent vibration impacts on structures and humans. Based on the potential site locations, auger drilling activities could occur within 50 feet of the nearest residential structure.

Caltrans vibration guidelines do not provide vibration levels specifically for an auger drill rig; however, the guidelines do provide vibration levels for caisson drilling of 0.089 in./sec. PPV. A caisson drill will typically drill a much larger hole than the type of bore performed for a solar foundation post (e.g., a caisson drill will be used to drill a bridge pier). Although a caisson drill is a more intensive activity that will result in greater vibration than an auger drill, it was used as a conservative reference for this analysis.

The PPV at the nearest residential structure is calculated to be 0.04 in./sec. PPV, which is below the Caltrans continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.3 in./sec. PPV and the strongly perceptible human annoyance threshold of 0.10 in./sec. PPV.[20] In addition, heavy construction-related activity involving drilling will be limited to daylight hours and will not occur during nighttime hours. Therefore, vibration impacts associated with construction of the gen-tie will be ***Less than Significant***.

Operation. Once constructed, the proposed Project will not have any components that will generate vibration levels. As noted earlier, the Project will result in temporary, short-term, and intermittent vibration impacts. Thus, operation of the proposed Project will not result in excessive vibration and impacts would be ***Less than Significant***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

Operations of the proposed Project will not result in any long-term or excessive vibration impacts. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

[19] Ibid. Pages 24-25.

[20] Ibid. Page 25.

As described above, ***Less than Significant*** Project-specific impacts related to this Checklist Item will occur and ***No Cumulative Impacts*** related to this Checklist Item will occur.

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?

Project Impact Analysis: ***No Impact***

The Project site is not located within area covered by an airport land use plan or within two miles of a public airport or public use airport. Therefore, the proposed Project will not expose people working in the Project area to excessive noise levels and ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

As previously discussed, the Project site is not located within area covered by an airport land use plan or within two miles of a public airport or public use airport. ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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3.14 Population/Housing

3.14.1 Summary of Findings

The proposed Project will result in ***No Impact*** related to Population and Housing and therefore, no mitigation measures are required. A detailed review of potential impacts is provided in the following analysis.

3.14.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Population and Housing. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Population and Housing in the County. The Regulatory Setting provides a description of the Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report and/or Tulare County General Plan 2030 Update Revised Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or minimize the impacts.

[1] CEQA Guidelines, Section 15126.2 (a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

- Induce Substantial Population Growth
- Displace Housing or People

3.14.3 Environmental Setting

"Tulare County, California is one of the largest counties in the San Joaquin Valley. Geographically it is situated about midway between San Francisco and Los Angeles, the two principal cities of the Pacific Slope… Within the confines of Tulare County are now 4,863 square miles, or 3,158,400 acres."[2]

Population

"According to the California Department of Finance estimates, the total population of Tulare County was 462,189 on January 1, 2015. The 2010 U.S. Census reported Tulare County the 8th largest county of growth in California. Numerically speaking, the 2010 Census data reports the County grew from 368,021 to 442,179, which is 20.2% growth. The population living in unincorporated areas of the County was 144,743, which represented 32% of the total population. Using the U.S. Census Bureau and California Department of Finance figures, the total population of Tulare County has grown 18% since the year 2000. However, much of that growth has occurred within the eight incorporated cities located throughout the County. Since 2000, the populations in the cities grew 26%, while the population of the unincorporated areas grew 2.7%. This growth pattern directed toward cities can be explained by availability of public services and infrastructure that cities can provide and results in the continuing annexation of unincorporated agricultural lands adjacent to city boundaries. In 1980, 51% of the County's total population lived in cities. Now it stands at 68%..."[3]

Housing

"It is the responsibility of the Tulare County Association of Governments (TCAG) to determine how to allocate to local jurisdictions the basic housing needs provided by the State Department of Housing and Community Development. The determination of household needs by income category is designed for the equitable distribution of households by income category within the region. The presumptive goal is to promote greater housing opportunities throughout the County."[4]

In January 2014, there were a total of 141,696 existing housing units in Tulare County. Out of the 141,696 housing units, 44,448 housing units were in the unincorporated areas of the county. According to the 2014 RHNA Plan, the total RHNA allocation for the unincorporated areas of the county for the 9.75-year period (January 1, 2014, to September 30, 2023) is 7,081 housing units.[5]

[2] Tulare County Association of Governments. Tulare County Regional Blueprint. May 2009. Pages 4 and 5. http://www.tularecog.org/RTPSCS/TulareCountyBluePrint.pdf. Accessed February 2020.

[3] Tulare County Housing Element, 2015 Update. Page 3-1.

[4] Ibid. Page 3-74.

[5] Ibid. Pages 3-74 and 3-75.

3.14.4 Existing Conditions

The Project site encompasses approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures. One of the Project parcels (APN 339-050-013) contains a single-family residence, barn, and ancillary buildings and structures.

3.14.5 Regulatory Setting

Federal

U.S. Department of Housing and Urban Development (HUD)

"HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes: utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business."[6]

State

California Department of Housing and Community Development (HCD)

HCD's mission is to "[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians."[7] "In 1977, the California Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element."[8]

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

6 HUD Website, http://portal.hud.gov/hudportal/HUD?src=/about/mission
7 HCD website, http://www.hcd.ca.gov/mission.html
8 Tulare County 2009 Housing Element Update, Adopted May 8, 2012, pages 3 to 4.

Local

Tulare County 2014 Regional Housing Needs Assessment Plan

It is the responsibility of the Tulare County Association of Governments (TCAG) to determine how to allocate to local jurisdictions the basic housing needs provided by the State Department of Housing and Community Development. The determination of household needs by income category is designed for the equitable distribution of households by income category within the region. The presumptive goal is to promote greater housing opportunities throughout the County. In 2014 the Regional Housing Needs Assessment Plan (RHNA) allocated a disproportionate amount of low and very low housing to the unincorporated area of Tulare County. In 2014, the RHNA plan provides a more equitable distribution of the regional housing needs allocation, as required by Section 65584 of the government Code, thereby providing greater affordable housing opportunities through the entire County including unincorporated areas as well as within the cities.''

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:

- Increase densities county-wide by 25% over the status quo densities.
- Establish light rail between cities.
- Extend Highway 65 north to Fresno County.
- Expand transit throughout the county.
- Maintain urban separators around cities.
- Growth would be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

"The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. …HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self-sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible." HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants."[9]

[9] Ibid. Page 112.

2015-2030 Tulare County Housing Element Policies

Policy 1.11. Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

Policy 1.14. Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Policy 1.34. Encourage and support a balance between housing and agricultural needs.

Policy 3.11. Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

3.14.6 Impact Evaluation

Would the Project:

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)?

Project Impact Analysis: ***No Impact***

The proposed Project is located within the unincorporated area of Tulare County and will not involve the development of permanent residences that will directly result in unplanned population growth in the area. The construction workforce is expected to reach a peak of approximately 1,000 temporary workers for construction of the Project. The unemployment rate in Tulare County, as of January 2020, was 11.0 percent.[10] The applicant expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale solar facilities. Based on the unemployment rate, and the availability of the local workforce, construction of the proposed Project will not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services. After the construction of the proposed Project, no permanent construction workers will be hired.

It is expected that the proposed Project will require an operational staff of up to 20 full-time employees. It is possible that the proposed Project could share O&M, substation, ESS, and/or transmission facilities with one or more nearby or future projects. In such a scenario, the Project could share personnel, thereby potentially reducing the Project's on-site staff. The full-time employees will maintain the facility 7 days per week during normal daylight hours.

The proposed Project will not induce substantial unplanned growth because it does not include new homes or businesses, as defined as a new "growing concern" in the County of Tulare, nor does it propose road extensions or any additional infrastructure that will generate an adverse effect to population growth. ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

[10] State of California Employment Development Department, Labor Market Information. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/visa$pds.pdf. Accessed March 2020.

As previously discussed, the proposed Project does not include development of homes or businesses nor does it propose road extensions or additional infrastructure that will generate adverse population growth as a result of the proposed Project. ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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

Project Impact Analysis: ***No Impact***

The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures. One of the Project parcels (APN 339-050-013) contains a single-family residence, barn, and ancillary buildings and structures. The existing site improvements on APN 339-050-013 will not be impacted by the proposed Project. The proposed Project will be developed around existing site improvements with no anticipated plans to replace or remove any existing structures. There are no housing units located on the remaining portions of the proposed Project area and no housing units or people will be displaced as a result of the proposed Project. Therefore, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As previously discussed above, there is one Project parcel that contains site improvements; however, the proposed Project will not impact the existing improved areas. The remaining parcels have no existing housing units or people that will be affected as a result of the proposed Project. The proposed Project will not displace any housing units or people, necessitating the construction of replacement housing elsewhere. ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

3.15 Public Services

3.15.1 Summary of Findings

The proposed Project will result in ***Less than Significant Impacts*** related to Public Services through implementation of the mitigation recommended in this section in the form of conditions of approval to the Special Use Permit. A detailed review of potential impacts is provided in the following analysis.

3.15.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Public Services. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting provides a description of the Public Services in the County. The Regulatory Setting provides a description of the Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report and/or Tulare County General Plan 2030 Update Revised Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or minimize the impacts.

[1] CEQA Guidelines, Section 15126.2 (a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

- Result in the need for new fire facilities
- Result in the need for new police facilities
- Result in the need for new schools
- Result in the overuse of parks
- Result in the need for other new public facilities

3.15.3 Environmental Setting

Fire Protection

The [formerly titled] California Department of Forestry and Fire Protection/Tulare County Fire Department (now CalFire/TCFD) serves 145,128 of Tulare County's population and in 2002, averaged 38.4 calls per day.[2] Fire occurrence data generated by the department indicate a direct relationship between high use areas of the county and fire occurrence. The population increase in the mountain areas have caused increased wildland urban interface problems as well. Structures are being built throughout wildland areas wherein vegetation fires can spread rapidly. Providing adequate fire protection to those structures has become a major undertaking.[3]

"..[T]he Tulare County Fire Department responded to 14,022 calls for service in 2002… [A] majority of the calls were for medical emergencies (52 percent) followed by fire calls (20 percent). The remaining calls ranged from dispatch incidents (8.1 percent) to assisting other agencies (7.3 percent) to public assistance (3.4 percent)."[4] Tulare County Fire Department maintains mutual aid agreements with neighboring fire agencies.

The department uses an "attack" time protocol of less than 10 minutes to respond to 90 percent of the calls on the valley floor and less than 15 minutes on 75 percent of calls in the foothill and mountain areas. The Project site is in the 15 minute response area as the nearest fire stations are located in Richgrove (south of the Project) and Terra Bella (north of the Project).

Police Protection

"In 2007, the Tulare County Sheriff's Department currently had 448 sworn officers serving its unincorporated population (145,128), and generates a level of service ratio of 3.2 officers per 1,000 residents. The ratio is above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff's Department also has 186 nonsworn clerical and support staff amounting to a total Sheriff's Department staff personnel of 633 employees."[5]

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[2] Tulare County General Plan 2030 Update, *Background Report*, Table 7-6.

[3] Ibid. Page 7-73.

[4] Ibid. Page 7-74.

[5] Ibid. Pages 7-71 and 7-72.

"Law enforcement protection for the unincorporated county is divided into 22 areas with four stations… [T]he Porterville substation serves the largest number of areas with 10 patrols, followed by the headquarters in Visalia with six, and Cutler-Orosi and Pixley, each with three areas."[6]

Schools

"A total of 48 school districts provide education throughout Tulare County… Of the 48 school districts, seven are unified districts providing educational services for kindergarten through 12th grade. The remaining 41 districts consist of 36 elementary school districts and four high school districts. Many districts have only one school."[7]

"Total enrolment in Tulare County public schools has increased from about 80,000 to 88,300 students during a nine-year span from 1993 to 2002. On average, the growth rate has remained steady with annual increases approximating two percent."[8]

Parks

"…there are 13 parks that are owned and operated by Tulare County. These parks are quite diverse, ranging from 3 acres to 160 acres in size. In addition to County parks, the County has extensive recreation and open space resources from Sequoia National Forest and Giant Sequoia National Monument to the Sequoia and Kings Canyon National Parks. The only State Park in Tulare County is Colonel Allensworth State Historic Park, which contains a museum and visitor center. The Mountain Home State Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of the City of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Two Federal recreational areas are also in Tulare County: Lake Kaweah and Lake Success."[9] See also Section 3.16 Recreation for additional information.

Libraries

"The Tulare County Public Library System comprises of interdependent branches, grouped by services, geography and usage patterns to provide efficient and economical services to the residents of the county. At present, there are 14 [17 as of February 202010] regional [branch] libraries and one main branch."11

3.15.4 Existing Conditions

The following identifies and describes the public service providers for the Project. **Figure 3.15-1** shows the location of the public services.

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[6] Ibid. Page 7-72.

[7] Ibid. Pages 7-75 and 7.76.

[8] Ibid. Page 7-76.

[9] Tulare County General Plan 2030 Update. Page 8-5.

[10] Tulare County Library. Locations. https://www.tularecountylibrary.org/locations. Accessed February 2020.

[11] Tulare County General Plan 2030 Update, *Background Report*, Page 7-96.

Fire Protection

Tulare County Fire Station No. 10, located at 20890 Grove Drive in Richgrove, is the nearest fire station to the Project, located approximately 2.45 miles southwest from the southernmost Project boundary; and Fire Station No. 21 is located at 23658 Avenue 95 in Terra Bella approximately 2.50 miles north of the northernmost Project boundary.

Police Protection

The nearest Tulare County Sheriff substations to the proposed Project are the Porterville substation located at 379 North 3rd Street in Porterville (approximately 11.19 miles north of the northernmost Project boundary) and the Pixley substation located at 161 North Pine Street in Pixley, (approximately 12.40 miles northwest from the westernmost Project boundary).

Schools

The nearest elementary school to the proposed Project site is Ducor Union Elementary School, located at 23761 Avenue 56 in Ducor, approximately 0.30 miles west of the nearest Project boundary (from APN 321-190-001).

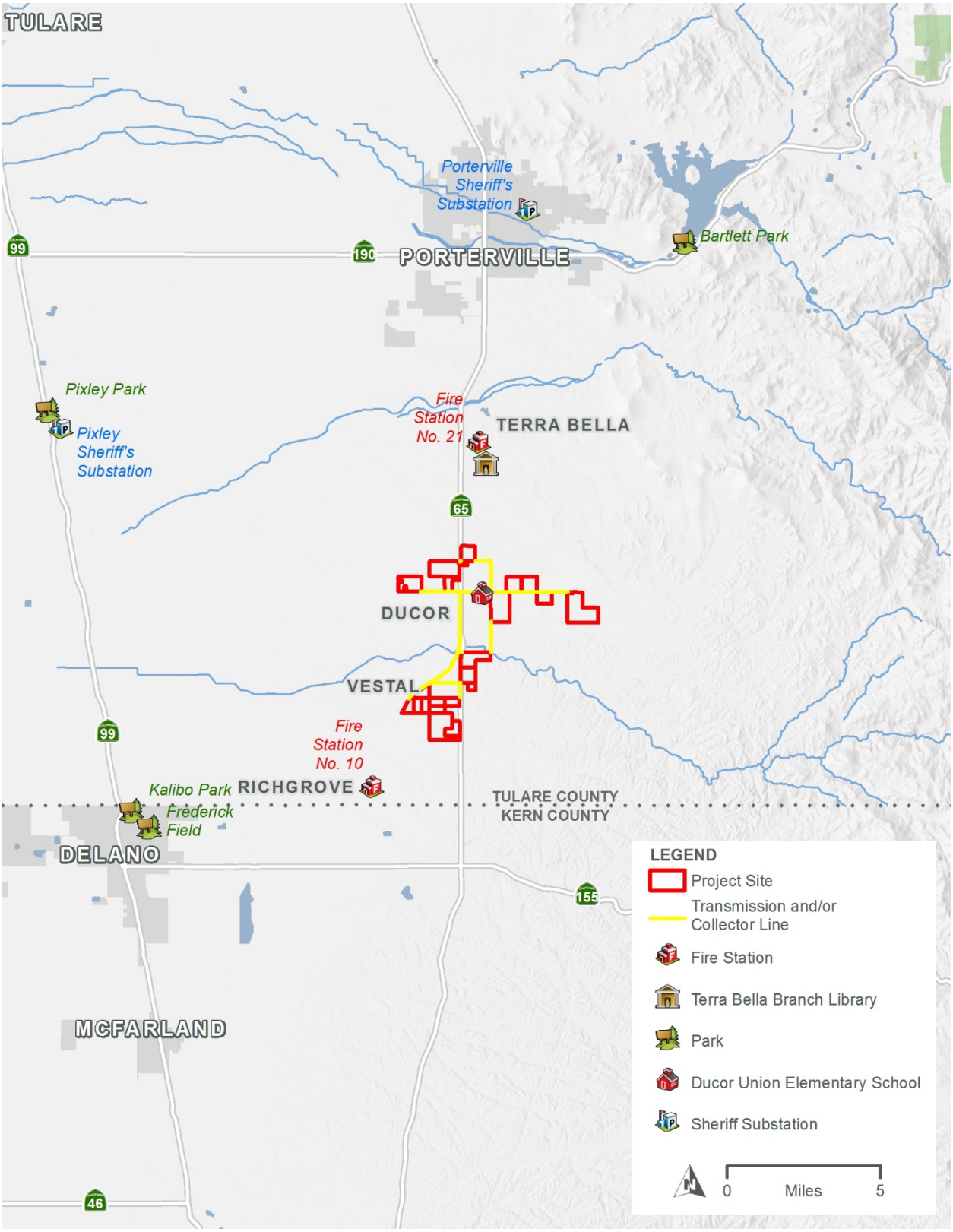
Parks

The Project site is located in a remote area of Tulare County, and is not near any of the County's local parks. The nearest neighborhood parks (Kalibo Park, Frederick Field) are located in Kern County (in the City of Delano), approximately 10 miles southwest of the Project site. The nearest County owned/operated recreational facilities are Bartlett Park (located approximately 11 miles northeast of the Project site) and Pixley Park (located 12 miles northwest of the Project site).

Libraries

The nearest library to the proposed Project site is the Terra Bella Branch Library, located at 23825 Avenue 92 in Terra Bella, approximately 2.95 miles north from the northernmost Project boundary.

Figure 3.15-1. Public Services



3.15.5 Regulatory Setting

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

PFS-7.1 Fire Protection. The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.2 Fire Protection Standards. The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.3 Visible Signage for Roads and Buildings. The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

PFS-7.5 Fire Staffing and Response Time Standards. The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards, and as provided in **Table 3.15-1**.

Table 3.15-1. Fire Staffing and Response Time Standards[12]

	Demographics	Staffing/Response Time	% of Calls
Urban	> 1,000 people/sq. mile	15 FF/9 min.	90
Suburban	500-100 people/sq. mile	10 FF/10 min.	80
Rural	<500 people/sq. mile	6 FF/14 min.	80
Remote*	Travel Dist. > 8 min.	4 FF/no specific response time	90

* Upon assembling the necessary resources at the emergency scene, the fire department should have the capacity to safety commence an initial attach within 2 minutes, 90% of the time. (FF = Fire Fighters)

PFS-7.6 Provision of Station Facilities and Equipment. The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.8 Law Enforcement Staffing Ratios. The County shall strive to achieve and maintain a staffing ratio of 3 sworn officers per 1,000 residents in unincorporated areas.

PFS-7.9 Sheriff Response Time. The County shall work with the Sheriff's Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

[12] Tulare County General Plan 2030 Update. Policy PFS – 7.5.

PFS-7.12 Design Features for Crime Prevention and Reduction. The County shall promote the use of building and site design features as means for crime prevention and reduction.

PFS-8.1 Work with Local School Districts. The County shall work with local school districts to develop solutions for overcrowded schools and financial constraints of construction new facilities.

PFS-8.4 Library Facilities and Services. The County shall encourage expansion of library facilities and services as necessary to meet the needs (e.g., internet access, meeting rooms, etc.) of future population growth.

3.15.6 Impact Evaluation

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?

Project Impact Analysis: ***Less than Significant with Mitigation***

The proposed Project is within the service area of the Tulare County Fire Department. The County of Tulare Fire Department has 28 stations that are located throughout the County within its most densely populated areas and currently maintains minimal staffing to meet the requirements set forth under NFPA 1720-1721 for a rural area. These requirements consist of one full-time person per station per shift with other paid on-call firefighters. Per the Tulare County Fire Department, while this is sufficient to meet the basic needs of the County, this level of staffing often results in an elevated fire loss value during some emergency conditions when compared with other departments with additional staff support.[13]

In addition to the need for additional staff, some facilities need repairs, replacements, or facility relocations. Currently, relocations are planned for the South Visalia and Alpaugh fire stations. Additional fire stations in need of relocation include West Olive, Tulare, and Dinuba fire stations.[14]

The Richgrove Fire Station, which is the nearest and will serve the proposed Project, is not listed among the stations needing relocation, repair or upgrade. Project-specific impacts related to this Checklist Item will potentially occur, as proposed Project implementation will increase the service area for the Richgrove Fire Station. With the implementation of **Mitigation Measures 3.15-1 through 3.15-13**, the Project-specific impacts will be ***Less than Significant with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will not significantly impact Tulare County Fire Department's response times. Therefore, cumulative impacts related to this Checklist Item will be ***Less than Significant.***

[13] Tulare County Recirculated Draft Environmental Impact Report (SCH # 2006041162). Page 3.9-25.

[14] Ibid.

Mitigation Measure(s):

3.15-1 Applicant shall provide an access road to the site and any facilities affected by the Special Use Permit.

3.15-2 Applicant shall submit plans for all new construction, and shall comply with the provisions of the 2019 Cal Green Building Code, Fire Code, Mechanical Code, Electric Code and Plumbing Code, as applicable.

3.15-3 The Tulare County Fire Department shall be notified of the proposed start date of any processing, storage, or special use granted and mitigated prior to initiation of any building operations.

3.15-4 Violations of any of these conditions shall result in Tulare County Fire Department's rescission of approval of the Special Use Permit.

3.15-5 Fire Department requires a Knox box to be installed at an approved location to permit entry to the site.

3.15-6 Access gate shall be set back 30 feet from the roadway for fire apparatus access.

3.15-7 All combustible vegetation shall be removed from the site and Tulare County Fire Department approved measures taken to prevent the accumulation of the combustible vegetation that would create a fire hazard.

3.15-8 Access roads shall be provided so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department.

3.15-9 Access roads shall be a minimum of 20 feet in width (non-obstructed), with a maintained 13 feet 5 inches vertical clearance.

3.15-10 20-foot fire access roads shall be constructed so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department.

3.15-11 Applicant shall be responsible for training fire personnel of facility operations, hazards and emergency procedures for shutting down the operation.

3.15-12 Posted address shall be visible from roadway, minimum 4-inch numbers.

3.15-13 If buildings are proposed, National Fire Protection Agency (NFPA) 1142 standards for rural water supplies shall be required.

Conclusion: ***Less than Significant with Mitigation***

With the implementation of **Mitigation Measures 3.15-1 through 3.15-13**, the Project-specific impacts related to this Checklist Item will be reduced to a ***Less than Significant*** level. Cumulative impacts related to this Checklist Item will be ***Less than Significant***.

Police protection?

Project Impact Analysis: ***No Impact***

The County of Tulare's Sheriff's Office will provide police protection services to the proposed Project upon development. Emergency response is adequate to serve the proposed Project.. There will be ***No Impact*** to police services.

Cumulative Impact Analysis: ***No Impact***

As noted earlier, the proposed Project will not impact police services. As such, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item are anticipated to occur.

Schools?

Project Impact Analysis: ***No Impact***

The closest elementary school to the proposed Project site is Ducor Union Elementary School, located at 23761 Avenue 56 in Ducor, approximately 0.30 miles west of the nearest Project boundary (from APN 321-190-001). The Project will not include any residential housing and, as such, will not result in any new or additional school students at any grade level.

Cumulative Impact Analysis:

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will not impact schools. As such, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item are anticipated to occur.

Parks?

Project Impact Analysis: ***No Impact***

Typically, the increased use of parks and recreational facilities result from the addition of new housing and the accompanying growth of persons. No new housing is included as part of the proposed Project. The majority of employees working at the site will be temporary during the construction-related period. Operation of the Project will require up to 20 full-time employees for maintenance and monitoring activities, but they will likely be drawn from the local labor force and will likely commute from their existing residences to the Project site.

The Project site is located in a remote area of Tulare County, and is not near any of the County's local parks. The nearest neighborhood parks (Kalibo Park, Frederick Field) are located in Kern County (in the City of Delano), approximately 10 miles southwest of the Project site. The nearest County owned/operated recreational facilities are Bartlett Park (located approximately 11 miles northeast of the Project site) and Pixley Park (located 12 miles northwest of the Project site). Absent any residential housing development, the proposed Project will not require that employees be added, or interfere with the use of these parks during operations or construction. Therefore, there will be ***No Impact*** on parks.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will not impact parks. As such, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item are anticipated to occur.

Other public facilities?

Project Impact Analysis: ***No Impact***

Other public facilities analyzed for this Project include water treatment plants, libraries, and solid waste disposal facilities.

The proposed Project will not require connection to a sewer line nor does it rely on a wastewater treatment facility to provide wastewater treatment. Thus, the proposed Project will not impact service levels of a waste water treatment facility.

The proposed Project does not involve the creation of any new residences and will not impact library service levels. As such, ***No Impact*** related to this Checklist Item will occur.

The proposed Project will not result in solid waste other than construction-related material which will be properly disposed at the nearest landfill as specified by the Tulare County Solid Waste Department. Upon decommissioning, panels, trackers, etc., will be properly disposed at the nearest landfill, or recycled, as specified by the Tulare County Solid Waste Department. As such, ***No Impact*** related to this Checklist Item will occur. See also Chapter 3.19 Utilities Service Systems.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will not impact other public facilities. As such, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item are anticipated to occur.

3.16 Recreation

3.16.1 Summary of Findings

The proposed Project will result in ***Less than Significant Impacts*** related to Recreation and therefore, no mitigation measures are required. A detailed review of potential impacts is provided in the following analysis.

3.16.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Recreation. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas." [1]

The Environmental Setting section provides a description of the Recreational Resources in the County. The Regulatory Setting section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines. Section 15126.2 (a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

- Increase use of existing recreational facilities
- Include or require additional recreational facilities

3.16.3 Environmental Setting

"…there are 13 parks that are owned and operated by Tulare County. [Also, after adoption of the Tulare County General Plan 2030 Update, two new parks were completed and became operational in the unincorporated communities of Plainview (Plainview Community Park) in 2016 and Earlimart (Earlimart Community Park) in 2017.]. These parks are quite diverse, ranging from 3 acres to 160 acres in size. In addition to County parks, the County has extensive recreation and open space resources from Sequoia National Forest and Giant Sequoia National Monument to the Sequoia and Kings Canyon National Parks. The only State Park in Tulare County is Colonel Allensworth State Historic Park, which contains a museum and visitor center. The Mountain Home State Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of the City of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Two Federal recreational areas are also in Tulare County: Lake Kaweah and Lake Success."[2]

3.16.4 Existing Conditions

The Project site encompasses approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. The area is a relatively flat agricultural landscape and is sparsely populated. The nearest County owned/operated recreational facilities are Bartlett Park (located approximately 11 miles northeast of the Project site) and Pixley Park (located 12 miles northwest of the Project site).

3.16.5 Regulatory Setting

Federal

United States National Park Service

The National Park Service (NPS) is a bureau of the U.S. Department of the Interior. "The NPS manages 419 individual units covering more than 85 million acres in all 50 states, the District of Columbia, and US territories."[3] The NPS also helps administer dozens of affiliated sites, the National Register of Historic Places, National Heritage Areas, National Wild and Scenic Rivers, National Historic Landmarks, and National Trails.

[2] Tulare County General Plan 2030 Update. Page 8-5.

[3] National Park Service. https://www.nps.gov/aboutus/national-park-system.htm. Accessed February 2020.

State

California Department of Parks and Recreation

"California Department of Parks and Recreation manages 280 park units, which contain the finest and most diverse collection of natural, cultural, and recreational resources to be found within California. These treasures are as diverse as California: From the last stands of primeval redwood forests to vast expanses of fragile desert; from the lofty Sierra Nevada to the broad sandy beaches of our southern coast; and from the opulence of Hearst Castle to the vestiges of colonial Russia. California State Parks contains the largest and most diverse natural and cultural heritage holdings of any state agency in the nation. State park units include underwater preserves, reserves, and parks; redwood, rhododendron, and wildlife reserves; state beaches, recreation areas, wilderness areas, and reservoirs; state historic parks, historic homes, Spanish era adobe buildings, including museums, visitor centers, cultural reserves, and preserves; as well as lighthouses, ghost towns, waterslides, conference centers, and off-highway vehicle parks. These parks protect and preserve an unparalleled collection of culturally and environmentally sensitive structures and habitats, threatened plant and animal species, ancient Native American sites, historic structures and artifacts the best of California's natural and cultural history."[4]

Local

Tulare County General Plan Policies

ERM-5.2 Park Amenities. The County shall provide a broad range of active and passive recreational opportunities within community parks. When possible, this should include active sports fields and facilities, community center/recreation buildings, children's play areas, multiuse areas and trails, sitting areas, and other specialized uses as appropriate.

ERM-5.3 Park Dedication Requirements. The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.

ERM-5.5 Collocated Facilities. The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.

3.16.6 Impact Evaluation

Would the Project:

a) 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?

Project Impact Analysis: ***No Impact***

Typically, the increased use of parks and recreational facilities result from the addition of new housing and the accompanying growth of persons. No new housing is proposed as part of the proposed Project. The majority of site employees will be temporary during the construction period. Operation of the Project will require up to 20 full-time employees for maintenance and monitoring activities but they will likely be drawn from the local labor force and will commute from their existing

[4] California Dept. of Parks and Recreation. http://www.parks.ca.gov/?page_id=91. Accessed February 2020.

permanent residences to the Project site during those times. Moreover, the nearest neighborhood parks (Kalibo Park, Frederick Field) are located in Kern County (in the City of Delano), approximately 10 miles southwest of the Project site. As a result of the proposed Project's land use, and the distance of the Project site to these existing recreational facilities, there will be ***No Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project does not include housing or the accompanying population growth. Operation of the Project will require up to 20 full-time employees, which will not significantly increase the use of parks or recreational facilities. As such, a ***Less than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific*** related to this resource will occur. A ***Less than Significant Cumulative Impact*** related to this Checklist Item will occur.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Project Impact Analysis: ***No Impact***

The proposed Project does not include new recreational facilities or the expansion of recreational facilities. Therefore, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

As described above, the proposed Project does not include new recreational facilities or the expansion of recreational facilities. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

3.17 Transportation

3.17.1 Summary of Findings

The proposed Project will result in ***Less than Significant Impacts*** related to Transportation. The impact analyses and determinations in this section are based upon information obtained from the "*Rexford Solar Farm Project Traffic Impact Analysis"* prepared by Stantec provided in Appendix "J" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.17.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Transportation. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting section provides a description of the Transportation facilities in the County. The Regulatory Setting section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines. Section 15126.2 (a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The thresholds of significance for this section includes the following:

- Result in a Level of Service (LOS) less than "D"
- Unsafe Roadway/Circulation Design
- Inadequate Access
- Need for Additional Public Transit
- Need for Additional Bike Facilities
- Need for Additional Pedestrian Facilities

3.17.3 Environmental Setting

"Tulare County's transportation system is composed of several State Routes, including three freeways, multiple highways, as well as numerous county and city routes. The county's public transit system also includes two common carriers (Greyhound and Orange Belt Stages), the AMTRAK Service Link, other local agency transit and paratransit services, general aviation, limited passenger air service and freight rail service.

Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County."[2]

"Tulare County has two major regional highways, State Highway [State Route (SR)] 99 and 198. State Highway [SR] 99 connects Tulare County to Fresno and Sacramento to the north and Bakersfield to the south. State Highway [SR] 198 connects from U.S. Highway 101 on the west and continues eastward to Tulare County, passing through the City of Visalia and into Sequoia National Park. The highway system in the County also includes State highways, County-maintained roads, and local streets within each of the eight cities."[3]

An additional highway pertinent to the proposed Project is State Highway 65 (also known as State Route, or SR 65) which traverses north-south and lies generally along the eastern edge of the valley portion of the County. The constructed portion of SR 65 extends south from SR 198 in the City of Exeter (and connects the cities of Lindsay and Porterville) and continues south through the Census Designated Places of Terra Bella and Ducor and continues through Kern County where it intersects with SR 99 just north of Bakersfield at the community of Oildale.

According to the SR 65 Transportation Concept Report prepared by Caltrans, the Project site is located along Segment 5 of the 17 identified segments of SR 65. "Segment 5 crosses flat terrain in a rural

[2] Tulare County General Plan Update 2030, Background Report. February 2010. Page 5-4.

[3] Tulare County General Plan 2030 Update. Page 13-2.

area and is surrounded by agricultural land. The route extends from the Kern/Tulare County line (PM 0.0) to Avenue 56 (PM R.7.0) at Ducor. This segment is a 2-lane Expressway…"[4]

3.17.4 Existing Conditions

This section describes the traffic and transportation conditions in the vicinity of the Project site, including the operating condition of the roadways (streets and highways) that could be affected by the Project.

A Traffic Impact Analysis (TIA) was prepared for the proposed Project by Stantec. The purpose of the TIA is to determine the amount of traffic generated by the Project during construction and operation and to identify potential traffic-related significant impacts on the affected portions of the circulation system. The TIA evaluated the following four study locations:

- SR 65 at Junction SR 155
- SR 65 at Kern/Tulare County Line
- SR 65 at Avenue 56
- SR 65 at Avenue 95

Existing Roadway System

The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of SR 65. SR 65 is a rural two-lane highway with paved shoulders in the Project vicinity. It runs in the north-south direction and bisects the Project area. It provides access to local roads that will be used to access the Project area.

Existing Traffic Conditions

Level of Service Methodology

The Sixth Edition Highway Capacity Manual (HCM) is a standard reference published by the Transportation Research Board, containing specific criteria and methods for assessing Level of Service (LOS). LOS is a qualitative measure of the performance of a transportation system element. The LOS for traffic is designated A through F, with LOS A representing free-flowing conditions and LOS F representing severe traffic congestion. LOS characteristics for roadway segments are presented in **Table 3.17-1**.

[4] California Department of Transportation. SR 65 Transportation Concept Report. June 2002. Page 20.

Table 3.17-1. Roadway Level of Service Descriptions

Level of Service	Traffic Flow Description
A	Minimal or no vehicle delay
B	Slight delay to vehicles
C	Moderate vehicle delays, traffic flow remains stable
D	More extensive delays at intersections
E	Long queues create lengthy delays
F	Severe delays and congestion

Significance Criteria

Tulare County uses a threshold of LOS D for the minimum acceptable operation of its transportation facilities. Facilities under the jurisdiction of Caltrans include freeway segments, ramps, ramp terminals, and arterials. Although Caltrans has not designated an LOS standard, Caltrans' *Guide for the Preparation of Traffic Impact Studies* indicates attempts to maintain the LOS of a state highway facility between LOS C and D thresholds.[5] For the purposes of this analysis, a LOS threshold of D is used to determine the significance of Project impacts.

Table 3.17-2 provides LOS and annual average daily traffic (AADT) volume thresholds for uninterrupted flow rural highways. Since Tulare County does not have established AADT volume thresholds for uninterrupted flow on rural highways, the volume thresholds used for this analysis are based on the Florida Department of Transportation guidelines, which is a source commonly used by traffic engineers for analyses of this type.

Table 3.17-2. Roadway Level of Service for Uninterrupted Flow Highways

Lanes	Median	A	B	C	D	E	F
2	Undivided	--	≤ 4,700	8,400	14,300	28,600	> 28,600
4	Divided	--	≤ 25,700	40,300	51,000	57,900	> 57,900
6	Divided	--	≤ 38,800	60,400	76,700	86,800	> 86,800

Source: Florida Department of Transportation 2012, Generalized Annual Average Daily Volumes for Florida's Rural Undeveloped Area and Developed Areas with less than 5,000 population.

Level of Service

Existing traffic conditions for the four study area roadway segments were evaluated based on LOS criteria and AADT thresholds for uninterrupted flow rural highways (**Table 3.17-2**). As shown in **Table 3.17-3**, all study area roadway segments currently operate at an acceptable LOS D or better.

[5] California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies. December 2002. Page ii.

Table 3.17-3. Existing Level of Service of Study Segments[6]

Roadway Segment	Facility Type	Allowable Daily Service Volume (LOS D)	AADT	LOS
SR 65 MP 23.186 – Junction SR 155	Two-Lane Rural Highway	14,300	6,900	C
SR 65 MP 0.000 – Kern/Tulare County Line	Two-Lane Rural Highway	14,300	6,900	C
SR 65 MP 6.983 – Avenue 56	Two-Lane Rural Highway	14,300	8,100	C
SR 65 MP 11.860 – Avenue 95	Two-Lane Rural Highway	14,300	11,900	D

Notes:
The Allowable Daily Service Volume was calculated for each location based on the unique peaking factors obtained from Caltrans.
AADT = average daily traffic; LOS = Level of Service; MP = Mile Post; SR = State Route

Design for Emergency Access

According to § 21060.3 and § 15359 of the CEQA Guidelines, an "Emergency" means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. A proposed Project could potentially generate impacts through inadequate design for emergency access.

Alternative Transportation

Public transit is currently available in Ducor via Tulare County Transit Agency (TCaT) Route 80 Porterville-Terra Bella-Ducor. Route 80 provides fixed-route stops at Avenue 56 and Carlisle Road and at the Shell Gas station located Avenue 56 and Brawley Road with one A.M. pick-up and one P.M return. [7] TCaT also provides Americans With Disability Act (ADA) compliant blended para-transit (Dial-a-Ride) services where eligible riders may request a route deviation pickup and/or drop off if it is within ¾ mile of Routes 10 – 90.[8]

"In Tulare County, bicycle travel is not yet considered a major mode of transportation and bicycles are rarely seen outside of cities and towns. The current bicycle plan provides for connections between the major urban areas and recreation facilities in the County and is expected to be satisfactory for the foreseeable future. The only bike route within or near the community [of Ducor] is State Route 65."[9]

"In Ducor, Class I/II/III facilities are envisioned to be implemented along the major circulation segments of roadway that connect the overall County roadway network. This includes Class III along parts of Avenue 196. Class II facilities are envisioned along parts of SR 65."[10]

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[6] "*Rexford Solar Farm Project Traffic Impact Analysis*." Table 6. Page 13. Prepared by Stantec and included in Appendix "J" of this EIR.

[7] Tulare County Association of Governments. Tulare County Area Transit (TCAT). Website accessed April 2020 at: www.ridetcat.org then click on "Fixed Routes" then click on "80 Porterville-Terra Bella" for route, route stops, schedule, etc.

[8] Ibid. Access www.ridetcat.org then click on "Dial-A-Ride" for scheduling, service hours, fares, etc.

[9] Ducor Community Plan 2015 Update. Page 42.

[10] Ibid. Page 99.

3.17.5 Regulatory Setting

State

Caltrans: Transportation Concept Reports

Caltrans has prepared a number of concept reports for State Routes, Interstate Routes, and US Routes for each District. Tulare County is located in Caltrans District 6. The concept report that applies to the proposed Project is the SR 65 Transportation Concept Report (TCR) prepared in June 2002. The Project site lies within Segment 5 consisting of 7 miles from the Kern County Line north to Avenue 56 at Ducor. According to the SR 65 TCR, a Caltrans project involving upgrading of this roadway was completed in 2010.

As of the year 2002, Route 65 is operating primarily at LOS D and LOS E from Bakersfield to Route 198 in Tulare County. Segment 5 had an LOS of D in 2002. According to the SR 65 TCR, the acceptable Concept LOS is C for SR 65. Segment 5 is expected to operate at LOS B with proposed improvements,, which will be widened to a 4-lane Expressway by the year 2025. There will be no residual capacity deficiencies. Additional right-of-way will be required on all segments to meet the Ultimate Transportation Corridor (UTC) of a 6-lane Freeway.

Caltrans Guide for the Preparation of Traffic Impact Studies

“The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process).”[11]

Local

Tulare County Transportation Control Measures

“Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

- Rideshare Programs;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;
- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities.”[12]

[11] California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies. December 2002. Page ii.

[12] Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report. Page 3.2-2.

Tulare County Association of Governments – 2018 Regional Transportation Plan

"The Regional Transportation Plan is a long range plan that every Metropolitan Planning Organization (MPO) is required to complete. The plan is meant to provide a long-range, fiscally constrained guide for the future of Tulare County's transportation system. The long range plan extends to the year 2042 in its scope. The plan accomplishes its goals by forecasting future growth, identifying regional priorities, and planning for infrastructure improvements."[13]

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

TC-1.14 Roadway Facilities. As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.

TC-1.15 Traffic Impact Study. The County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS "D" or worse occurs, will be required to prepare and submit this study. The traffic impact study will include impacts from all vehicles, including truck traffic.

TC-1.16 County Level of Service (LOS) Standards. The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual.

HS-1.9 Emergency Access. The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

3.17.6 Impact Evaluation

Would the Project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Project Impact Analysis: ***Less than Significant Impact***

Construction Trip Generation. The proposed Project is expected to generate a total passenger car equivalent (PCE) volume of approximately 1,226 average daily trips (ADT), which includes 1,075 passenger car trips and 70 heavy vehicle trips per day during construction-related activities. As noted earlier, the construction time frame is estimated to last 12-24 months. As such, trips generated during this phase will be temporary, short-term, and intermittent and will decrease to 50 ADT associated with O&M-related activities upon completion of construction-related activities.

Existing plus Construction Conditions. For the Existing plus Construction Conditions scenario, 100 percent of the construction trips were assigned to each study area roadway segment

[13] Tulare County Association of Governments. Regional transportation Plan 2018. https://tularecog.org/tcag/planning/regional-transportation-plan-rtp/. Accessed March 20202.

individually as a worst-case scenario. As shown in **Table 3.17-4**, with the addition of construction traffic, all study area roadway segments will operate at acceptable LOS D or better. As all study area roadway segments will not exceed the LOS D threshold, traffic impacts during construction will be ***Less than Significant.***

Operations. Once the Project is constructed, maintenance will generally be limited to the following: cleaning of PV panels, monitoring electricity generation, providing site security, and facility maintenance (replacing or repairing inverters, wiring, and PV modules). It is anticipated that the proposed Project will require an operational staff of up to 20 full-time employees. For the purposes of this analysis, it was assumed that all employees will work during the day shift, resulting in approximately 50 trips per day based on an average trip rate of 2.5 trips per employee. The average trip rate of 2.5 trips per employee assumes that employee work during the day shift is 2 trips (one in and one out). Some employees may travel an additional trip in between (e.g., lunch, errand, etc.), therefore an average of 2.5 trips per employee was assumed. Because O&M activities will not generate a substantial number of trips that could have any significant effect on LOS, and will be lower than the trips generated during Project construction-related activities, traffic impacts associated with O&M will be ***Less than Significant***.

Alternative Transportation. According to the Ducor Community Plan 2015 Update, the only bike route within or near the community of Ducor is SR 65. Class III bicycle facilities are envisioned along parts of SR 65. The Project site will not be accessed directly from SR 65. Therefore, implementation of the Project will not introduce a barrier to non-motorized travel or decrease the performance or safety of existing or proposed bicycle facilities.

Route 80 provides fixed-route stops at Avenue 56 and Carlisle Road and at the Shell Gas station located Avenue 56 and Brawley Road. The Project will not require closures of public roads, which could inhibit access of buses to existing bus stops. Therefore, implementation of the Project will not decrease the performance or safety of transit facilities.

The Project will not conflict with adopted policies, plans, or programs supporting alternative transportation. Therefore, the Project will cause a ***Less than Significant*** related to transit, bicycle, or pedestrian facilities.

Table 3.17-4. Existing plus Construction Traffic LOS of Study Segments[14]

Roadway Segment	Facility Type	Allowable Daily Service Volume (LOS D)	AADT	LOS
SR 65 MP 23.186 – Junction SR 155	Two-Lane Rural Highway	14,300	8,126	C
SR 65 MP 0.000 – Kern/Tulare County Line	Two-Lane Rural Highway	14,300	8,126	C
SR 65 MP 6.983 – Avenue 56	Two-Lane Rural Highway	14,300	9,326	D
SR 65 MP 11.860 – Avenue 95	Two-Lane Rural Highway	14,300	13,126	D

Notes:
The Allowable Daily Service Volume was calculated for each location based on the unique peaking factors obtained from Caltrans.
AADT = average daily traffic; LOS = Level of Service; MP = Mile Post; SR = State Route

Cumulative Impact Analysis: ***Less than Significant Impact***

The primary geographic area of this cumulative analysis is considered to be the entire stretch of SR 65 from SR 198 to the north (Exeter) to SR 99 to the south (Bakersfield). This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and the "*Rexford Solar Farm Project Traffic Impact Analysis"* (provided in Appendix "J" of this DEIR).

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, all study area roadway segments will operate at acceptable LOS D or better during construction- and operations-/maintenance-related activities of the proposed Project. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Project Impact Analysis: ***No Impact***

In accordance with Senate Bill (SB) 743, the new CEQA Guidelines section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas, and shifts the focus from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this

[14] "*Rexford Solar Farm Project Traffic Impact Analysis*." Table 8. Page 16. Prepared by Stantec and included in Appendix "J" of this EIR.

section shall apply statewide. Tulare County is currently engaged in this process and has not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Since the regulations of SB 743 have not been finalized or adopted by the County, delay and LOS are the measures used in this EIR to determine the significance of transportation impacts (see impact discussion a),earlier). As such, no further analysis is required and ***No Impact*** related to CEQA Guidelines section 15064.3, subdivision (b) will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

As described above, since the regulations of SB 743 have not been finalized or adopted by the County, delay and LOS are the measures used in this EIR to determine the significance of transportation impacts. As noted earlier, all study area roadway segments will operate at acceptable LOS D or better during construction and operation of the proposed Project. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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

Project Impact Analysis: ***Less than Significant Impact***

Construction-related activities of the Project will require the delivery of off-road heavy construction-related equipment and facility materials, some of which may require transport by oversize vehicles. The use of oversize vehicles during construction-related activities can create a hazard to the public by limiting motorist views on roadways and by the obstruction of space, as these vehicles will be slow to accelerate and will require larger distances to decelerate or stop than the passenger cars. However, the construction-related heavy duty vehicles are not substantially different than the existing heavy duty vehicles that are routinely found on SR 65 related to agricultural uses in the area. Therefore, the addition of additional construction-related heavy vehicles does not represent a substantial change from the existing condition.

Construction-related oversize vehicle loads must comply with permit-related and other requirements of the California Vehicle Code and California Streets and Highway Code. California Highway Patrol escorts may be required at the discretion of Caltrans and Tulare County, and will be detailed in respective oversize load permits.. Furthermore, the Project will not include a design feature or utilize vehicles with incompatible uses that will create a hazard on the roadways surrounding the Project site. Impacts associated with transportation-related hazards resulting from a Project geometric design feature or incompatible uses will be ***Less than Significant***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is considered to be the segment of SR 65 county roads (Avenue 56 and Richgrove Drive) accessing the site.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, no significant design changes that will result in a hazard are proposed. As such, a ***Less than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

d) Result in inadequate emergency access?

Project Impact Analysis: ***Less than Significant Impact***

The proposed Project is located in a rural area. Construction-related vehicles will primarily access the Project site from existing local roadways, and may also utilize county roads (Avenue 56 and Richgrove Drive). The site will not be accessed directly from SR 65. Access improvements to the Project site will be implemented in accordance with the Tulare County Fire Department's "Requirements for Large Ground Mounted Non-Residential Solar Projects." Site access requirements include the following:

- Installation of a Knox Box at an approved location,
- Access gates shall be set back 30 feet from the roadway for fire apparatus access,
- Access roads shall be provided so that no portions of the PV panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department,
- Access roads shall be a minimum of 20 feet in width, with a maintained 13.5-foot vertical clearance,
- Twenty-foot fire access roads shall be constructed so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department, and
- Address shall be visible from roadway; minimum 4-inch numbers.

As described earlier in impact discussion a), increased Project-related operational traffic will not cause a significant increase in congestion and will not significantly affect the existing LOS on area roads. Furthermore, the Project will not require closures of public roads, which could inhibit access by emergency vehicles. During construction-related activities of the Project, heavy construction-related vehicles (e.g., heavy duty tractor-trailers) could interfere with emergency response to the site or emergency evacuation procedures in the event of an emergency (e.g., by slowing vehicles traveling behind the truck, which are typically slower to accelerate and require longer distances to stop). However, given that there are very few businesses and residences, and no emergency response stations in the immediate vicinity of the Project site, the intermittent, short-term, and temporary occurrence of heavy construction-related traffic will not result in inadequate emergency access. Therefore, the Project will allow for adequate emergency access during construction- and operation-related activities and a ***Less than Significant Impact*** will occur.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is considered to be the segment of SR 65, which provides regional access to the area, as well as county roads (Avenue 56 and Richgrove Drive) and local roadways to be used for accessing the site. Access to the site will not be permitted directly from SR 65.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, access improvements to the Project site will be implemented in accordance with the Tulare County Fire Department's "Requirements for Large Ground Mounted Non-Residential Solar Projects." The proposed Project will not result in inadequate emergency access during construction and operation. As such, a ***Less than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

3.18 Tribal Cultural Resources

3.18.1 Summary of Findings

The proposed Project will result in ***Less Than Significant Impacts with Mitigation*** to Tribal Cultural Resources. The Southern San Joaquin Information Center (SSJVIC) at California State University, Bakersfield conducted a cultural resources records search on October 11, 2019 and January 2, 2020. In addition to the records search, the Native American Heritage Commission (NAHC) conducted a Sacred Lands File (SLF) search and provided their results on October 8, 2019 (see "*Rexford Solar Farm Project Cultural Resources Assessment Report"* included in Appendix "E" of this Draft EIR [or DEIR]). This information, and additional analysis in the resource discussion item, are used as the basis for determining that this Project will result in Less Than Significant Impact with Mitigation. A detailed review of potential impacts is provided in the following analysis.

3.18.2 Introduction

CEQA Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources.[1] If a proposed project may cause a substantial adverse effect on the significance of a historical resource, then the project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of "historical resources" is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. "Substantial adverse change" is defined as "physical demolition, destruction, relocation, or alteration of the resource…"

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the project site. Provisions for the accidental discovery of historical or unique archaeological resources encountered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."

This section of the Draft EIR for the Project meets CEQA requirements by addressing potential impacts to tribal cultural resources on the proposed Project site. The Environmental Setting section provides a description of cultural resources in the region, with special emphasis on the proposed Project site and vicinity. The Regulatory Setting section provides a description of applicable State and local regulatory policies. Results of cultural resources reports from CHRIS are included in Appendix "E" of this DEIR. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] *"CEQA Basics"* http://ohp.parks.ca.gov/?page_id=21721. Accessed March 2020.

CEQA Thresholds of Significance

"Would the project 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:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources a defined in Public Resources Code section 5020.1(k), or
- 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. In applying the 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."[2]

3.18.3 Environmental Setting

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[3]

3.18.4 Existing Conditions

Records Search Results

On October 11, 2019 and January 2, 2020, Rincon conducted a search of the California Historical Resources Information System (CHRIS) from the Southern San Joaquin Information Center (SSJVIC) at California State University, Bakersfield. The SSJVIC records search identified 16 previous studies within a 0.5-mile radius of the Project site. Out of the 16 previous studies, three studies are within the Project site.

The SSJVIC records search identified 10 cultural resources documented within a 0.5-mile radius of the Project site. Six of the 10 resources are recorded within the Project site. These six resources include two prehistoric isolates and four historic-period built-environment features.

Native American Consultation

The Office of Planning and Research, State Clearinghouse (OPR/SCH), received a submittal from the Tulare County RMA on February 14, 2020, regarding a Notice of Preparation (NOP) of a Draft EIR for the Rexford Solar Farm Project. The Native American Heritage Commission (NAHC) was included in the list of agencies to be notified by OPR/SCH and provided a response on February 18, 2020. The NAHC maintains a contact list of Native American Tribes as having traditional lands located within the County's jurisdiction. On October 3, 2019, Rincon Consultants submitted a Sacred Lands File Search (SLF) to the NAHC and received a reply on October 8, 2019 indicating "negative results" of the SLF

[2] CEQA Guidelines Appendix "G" Item XVIII. Tribal Cultural Resources.

[3] Tulare County General Plan 2030 Update. Page 8-5.

and provided a recommended list of seven Native American Tribes the county should consult with regarding the Project. As such, on February 25, 2020, the County mailed (via certified-mail) tribal consultation to the seven Native American Tribes recommended by the NAHC (see Appendix "E" of this DEIR).

3.18.5 Regulatory Setting

Federal

National Historic Preservation Act

The Advisory Council on Historic Preservation (ACHP) is an independent federal agency with the primary mission to encourage historic preservation in the government and across the nation. The National Historic Preservation Act (NHPA), which established the ACHP in 1966, directs federal agencies to act as responsible stewards when their actions affect historic properties. The ACHP is given the legal responsibility to assist federal agencies in their efforts and to ensure they consider preservation during project planning reviews federal programs and policies to promote effectiveness, coordination, and consistency with national preservation policies. A key ACHP function is overseeing the federal historic preservation review process established by Section 106 of the NHPA. Section 106 requires federal agencies to consider the effects of projects, carried out by them or subject to their assistance or approval, on historic properties and provide the ACHP an opportunity to comment on these projects prior to a final decision on them. The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources.[4]

State

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.[5]

Among OHP's responsibilities are to identify, evaluate, and register historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in California State University Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.[6]

[4] Advisory Council on Historic Preservation. https://www.achp.gov/sites/default/files/documents/2018-06/AboutTheACHPFactSheet2015v3_1.pdf

[5] Advisory Council on Historic Preservation, State Historic Preservation Officers, http://www.achp.gov/shpo.html

[6] California Office of Historic Preservation, About OHP, http://ohp.parks.ca.gov/?page_id=1066

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.[7]

Assembly Bill 52

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Existing law establishes the NAHC and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintain an inventory of sacred places.[8]

The NAHC performs a Sacred Lands File search for sites located on or near the Project site upon request. The NAHC also provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. As indicated on the NAHC's letter dated October 8, 2019, a SLF check indicated negative results (that is, no Sacred Lands were identified) for the Project location (See Appendix "E" of this EIR). An opportunity has been provided to Native American tribes listed by the NAHC during the CEQA process as required by AB 52, and three (3) tribes responded to the consultation requests within the mandatory response time-frames. A representative from the Santa Rosa Rancheria responded that they were in receipt of

[7] California Office of Historic Preservation. California Register. http://www.ohp.parks.ca.gov/?page_id=21238

[8] Native American Heritage Commission, About the Native American Heritage Commission, http://nahc.ca.gov/about/, accessed December 2019

the consultation notice and would defer to the Tule River and Tejon Tribes. Subsequently, the Tejon Tribe also deferred to the Tulare River Tribe. The Tule River Tribe replied to the NOP via email requesting further consultation and copies of CHRIS search and studies prepared. As such, the County of Tulare RMA forwarded the SSJIC report and SLF results mailed to the Tule River Tribe (See Appendix "E" of this DEIR). Therefore, this DEIR has been prepared and completed consistent and compliant with AB 52 regarding tribal consultation.

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

"(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process."[9]

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to Public Resources Code § 5097.98, which provides specific guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

"(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

[9] CEQA Guidelines, Section 15064.5(c).

(2) The requirements of CEQA and the Coastal Act."[10]

"(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner or the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The mostly likely descendent may make recommendations to the landowner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

(2) Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."[11]

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."[12]

[10] CEQA Guidelines, Section 15064.5(d).

[11] CEQA Guidelines, Section 15064.5(e).

[12] CEQA Guidelines, Section 15064.5(f).

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

ERM-6.1. Evaluation of Cultural and Archaeological Resources. The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

ERM-6.2 Protection of Resources with Potential State or Federal Designations. The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources. When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation. If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.8 Solicit Input from Local Native Americans. The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

ERM-6.9 Confidentiality of Archaeological Sites. The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

ERM-6.10 Grading Cultural Resources Sites. The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

3.18.6 Impact Evaluation

Would the Project 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:

a) 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)?

Project Impact Analysis: ***Less than Significant Impact with Mitigation***

Tribal cultural resources are: 1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing in the California Register of Historical Resources (California Register), or local register of historical resources, as defined in PRC Section 5020.1(k); or, 2) a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). For a cultural landscape to be considered a tribal cultural resource, it must be geographically defined in terms of the size and scope of the landscape (PRC Section 21074[b]). Also, a historical resource, as defined in PRC Section 21084.1, unique archaeological resource, as defined in PRC Section 21083.2(g), or non-unique archaeological resource, as defined in PRC Section 21083.2(h), may also be a tribal cultural resource.

As previously discussed above, Rincon Consultants conducted a records search of site files and maps by the SSJVIC at California State University, Bakersfield. On October 3, 2019, Rincon Consultants submitted a SLF search to the NAHC and received a reply on October 8, 2019 indicating “negative results” of the SLF and provided a recommended list of seven Native American Tribes the county should consult with regarding the Project. As such, on February 25, 2020, the County mailed (via certified-mail) tribal consultation to the seven Native American Tribes recommended by the NAHC (see Appendix “E” of this EIR).

Through a records search and background research at the SSJVIC and a SLF search, no known tribal cultural resources listed or determined eligible for listing in the California Register, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), will be impacted by the Project. In addition, the County did not determine any resource that could potentially be affected by the Project to be a tribal cultural resource significant pursuant to criteria set forth in PRC Section 5024.1(c).

Although no tribal cultural resources have been identified, it is possible that subsurface discoveries could occur. If any previously unrecorded archaeological resource were identified during ground-disturbing construction-related activities and were found to qualify as a tribal cultural resource pursuant to PRC Section 21074(a)(1) (determined to be eligible for listing in the California Register or in a local register of historical resources), any impacts to the resource resulting from the Project could be potentially significant. However, **Mitigation Measures 3.5-1 and 3.5-2** are included in the unlikely event that Native American remains or tribal cultural resources are unearthed during any ground disturbance activities. These measures require that all work will immediately halt and the NAHC will be contacted to assess the findings and make appropriate mitigation recommendations. With the implementation of **Mitigation Measures 3.5-1 and 3.5-2**, the Project-specific impacts will be ***Less than Significant Impact with Mitigation***.

Cumulative Impact Analysis: ***Less than Significant Impact with Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measures 3.5-1 and 3.5-2**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will also be considered ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s): **See Mitigation Measures 3.5-1 and 3.5-2**

Conclusion: ***Less than Significant Impact with Mitigation***

With implementation of **Mitigation Measures 3.5-1 and 3.5-2**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

b) 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?

Project Impact Analysis: ***Less than Significant Impact with Mitigation***

See earlier discussion at Item a).

Cumulative Impact Analysis: ***Less than Significant Impact with Mitigation***

See earlier discussion at Item a).

Mitigation Measure(s): ***See Mitigation Measures 3.5-1 and 3.5-2***

Conclusion: ***Less than Significant Impact with Mitigation***

See earlier discussion at Item a).

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3.19 Utilities and Service Systems

3.19.1 Summary of Findings

The proposed Project will result in ***Less than Significant Impacts*** related to Utilities and Service Systems and therefore, no mitigation measures are required. The impact analysis and determinations related to water supply are based upon information obtained from the "*Rexford Solar Project Water Supply Assessment"* prepared by Rincon Consultants, Inc. (Rincon), provided in Appendix "K" of this Draft EIR (or DEIR). A detailed review of potential impacts is provided in the following analysis.

3.19.2 Introduction

CEQA Requirements

This section of the Draft EIR addresses potential impacts to Utilities and Service Systems. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a) of the CEQA Guidelines, "[a]n EIR shall identify and focus on the significant effects of the proposed Project on the environment. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The Environmental Setting section provides a description of the Utilities and Service Systems setting in the County. The Regulatory Setting section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

[1] CEQA Guidelines. Section 15126.2 (a).

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

- 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.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- 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.
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.19.3 Environmental Setting

"Tulare County and special districts provide many important services to County residents and businesses in unincorporated communities and hamlets such as water, wastewater, storm drainage, solid waste removal, utilities, communications, fire protection, law enforcement, and a number of other community facilities and services (schools, community centers, etc.)."[2]

"Water districts supply water to communities and hamlets throughout the County. Most communities and some hamlets have wastewater treatment systems; however, several communities including Three Rivers, Plainview, Alpaugh, and Ducor rely on individual septic systems. Storm drainage facilities are generally constructed and maintained in conjunction with transportation improvements or new subdivisions in communities. Solid waste collection in the County is divided into service areas, as determined by the Board of Supervisors, with one license for each area. Southern California Edison provides electric service to the south and central areas of Tulare County while PG&E provides electric service in the north. The [Southern California] Gas Company is the primary provider of natural gas throughout the County."[3]

"Tulare County operates three active solid waste disposal facilities, or landfills: Visalia, Woodville [currently inactive but will reinitialize operation in 2021-2022], and Teapot Dome [currently active but will cease operation in 2021-2022]. These landfills serve all of Tulare County as well as surrounding counties. Similarly, a small amount of solid waste from Tulare County is transported to surrounding county landfills. In addition, there are seven [six] transfer stations located throughout the isolated rural areas of the county for the convenience of those residents who live outside of waste collection service areas."[4] [5]

[2] Tulare County General Plan 2030 Update. Public Facilities and Services. Page 14-3.

[3] Ibid.

[4] Tulare County General Plan Update 2030, Background Report. February 2010. Pages 7-67 and 7-68.

[5] Tulare County Solid Waste Department. Website access April 2020 at: https://tularecounty.ca.gov/solidwaste/index.cfm/landfills/locations-fees/

3.19.4 Existing Conditions

Electricity and Natural Gas

Electrical and natural gas services for the Project are provided by Southern California Edison, and Southern California Gas Company, respectively.

Water

Tule Subbasin

The Project area overlies the Tule Subbasin. "The Tule Subbasin is located primarily in southern Tulare County with a small portion in Kern County. The Subbasin spans approximately 467,000 acres (733 square miles) and is bounded as follows: on the west by the Tulare County line and the boundary to the Tulare Lake Subbasin; on the north by the northern boundaries of Lower Tule Irrigation District and Porterville Irrigation District, along the boundary of the Kaweah Groundwater Subbasin; on the east at the edge of the alluvium and crystalline bedrock of the Sierra Nevada foothills; and to the south at the Tulare-Kern County line. The Tule River, Deer Creek, and White River empty into the Tulare Lake bed and serve as the major drainages in the Subbasin."[6]

"In the southern part of the Subbasin, in which the Project area is located, groundwater levels were relatively stable between 1987 and 2007 but began declining after 2007. The Tule Subbasin has an estimated average overdraft of 160,000 [acre feet per year] AFY, which has led to issues such as groundwater depression zones and land subsidence."[7]

"…Groundwater produced from the Tule Subbasin is primarily used for irrigated agriculture. Between 1987 and 2017, the Tule Subbasin lost an average of 777,000 AFY in groundwater pumping and natural outflow. During this same period, the Tule Subbasin gained an average 617,000 AFY in natural and artificial recharge. Consequently, the Subbasin experienced an annual net loss of approximately 160,000 AFY in stored groundwater. This suggests the presence of overdraft conditions.

Kern County Subbasin

It is anticipated that groundwater pumped from the Kern County Subbasin may be used to support the Project. The Project Area is located approximately two miles north of the boundary to the Kern County Subbasin. "The Kern County Subbasin is located within the southernmost portion of the Tulare Lake Hydrologic Region of the San Joaquin River Basin. The Subbasin spans approximately 1,792,000 acres (2,800 square miles) and is bounded as follows: on the east by the Sierra Nevada; on the south by the Tehachapi mountains, San Emigdio mountains, and White Wolf Subbasin; on the west by the Coast Range (Temblor Range); and to the north by the Kettleman Plain, Tulare Lake, and Tule Subbasins."[8]

"Groundwater elevation patterns in the Kern County Subbasin show seasonal responses from pumping and recharge operations. Overall, the majority of the Subbasin has experienced long-term decline in groundwater level. Severe drought conditions from 2012 through 2016 resulted in significant declines in groundwater levels across the Subbasin. Groundwater levels recovered in 2017. In general,

[6] "*Rexford Solar Project Water Supply Assessment*"." Page 12. Prepared by Rincon and included in Appendix "K" of this EIR.
[7] Ibid. Page 13.
[8] Ibid. Pages 16-17.

groundwater levels in the Kern County Subbasin decline during below normal water years and begin to recover during above normal water years."[9]

"…[The] Kern County Subbasin lost an annual average of approximately 1.6 million AFY via groundwater pumping and approximately 87,000 AFY in natural subsurface outflow between 1995 and 2014. Through this same period, the Subbasin recharged an average of approximately 1.4 million AFY via deep percolation, canal seepage, surface water inflow, and managed recharge. Accordingly, the Subbasin experienced an average net loss of approximately 277,000 AFY per year from 1995 to 2014. As with the Tule Subbasin, this trend indicates ongoing overdraft conditions in the Kern County Subbasin."[10]

Kern-Tulare Water District

A small portion of the Project area (APN No. 339-070-026) is located within the Kern-Tulare Water District (KTWD) service area. The KTWD was formed in 1974 for the purposes of providing irrigation water to local agricultural producers. KTWD is comprised of 20,140 acres spanning Kern and Tulare Counties.

The KTWD water portfolio is comprised of a combination of imported surface water, groundwater, and oilfield produced water.

Wastewater

The Project site is located near the unincorporated community of Ducor. As described above, several communities in unincorporated areas of Tulare County are served by individual or community septic systems, including Ducor.

Solid Waste

The nearest solid waste facility to the Project site is the Teapot Dome Landfill located near Porterville. It serves the City of Porterville and unincorporated areas of southern Tulare, and northern Kern Counties. According to the California Department of Resources Recycling and Recovery (CalRecycle), Teapot Dome Landfill is permitted to accept 800 tons per day of solid waste. The landfill has a remaining capacity of 712,861 cubic yards out of a total maximum capacity of 8,320,307 cubic yards and has an estimated closure date of 2022.[11] As noted earlier, Teapot Dome Landfill is scheduled for cessation of operations in 2020-2021; however, the reinitialization of operations at Woodville Landfill will commence in 2020-2021 to receive solid waste that would typically be hauled to Teapot Dome.

[9] Ibid. Pages 17-18.

[10] Ibid. Page 18.

[11] CalRecycle. Solid Waste Information System (SWIS) Facility Detail – Teapot Dome Disposal Site (54-AA-0004). https://www2.calrecycle.ca.gov/swfacilities/Directory/54-AA-0004/. Accessed March 2020.

3.19.5 Regulatory Setting

Federal

Resource Conservation and Recovery Act (RCRA)[12]

Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

- Protecting human health and the environment from the potential hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner.

To achieve these goals, RCRA established three distinct, yet interrelated, programs:

- The solid waste program, under RCRA Subtitle D, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.
- The hazardous waste program, under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal – in effect, from "cradle to grave."
- The underground storage tank (UST) program, under RCRA Subtitle I, regulates underground storage tanks containing hazardous substances and petroleum products.

RCRA banned all open dumping of waste, encouraged source reduction and recycling, and promoted the safe disposal of municipal waste. RCRA also mandated strict controls over the treatment, storage, and disposal of hazardous waste.

State

California Energy Commission (CEC)

The CEC regulates the provision of natural gas and electricity within the State. The CEC is the State's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the State response to energy emergencies.

California Global Warming Solutions Act of 2006 (AB 32)

With the passage of AB 32, the State Board Air Resources Board was required to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in

[12] U.S. Environmental Protection Agency. Resource Conservation and Recovery Act (RCRA) Overview. https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview. Accessed February 2020.

1990 to be achieved by 2020. “California has a long track record of reducing greenhouse gas emissions by turning waste into resources, exemplified by the waste diversion rate from landfills of 54 percent (which exceeds the current 50 percent mandate) resulting from recovery of recyclable materials. Re-introducing recyclables with intrinsic energy value back into the manufacturing process reduces greenhouse gas emissions from multiple phases of product production including extraction of raw materials, preprocessing and manufacturing. Additionally, by recovering organic materials from the waste stream, and having a vibrant composting and organic materials industry, there is an opportunity to further reduce greenhouse gas emissions through the indirect benefits associated with the reduced need for water and fertilizer for California’s Agricultural sector.”[13]

California Public Utilities Commission (CPUC)

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Senate Bill 610

With the introduction of SB 610, any project under CEQA shall provide a WSA if:

- The project meets the definition of the Water Code Section 10912:

  For the purposes of this part, the following terms have the following meanings:

  (a) ‘‘Project’’ means any of the following:

  (1) A proposed residential development of more than 500 dwelling units.

  (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

  (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

  (4) A proposed hotel or motel, or both, having more than 500 rooms.

  (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

  (6) A mixed-use project that includes one or more of the projects specified in this subdivision.

  (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

[13] California Air Resources Board Climate Change Scoping Plan. December 2008. Page 62. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed February 2020.

(b) If a public water system has fewer than 5,000 service connections, then ‘‘project’’ means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

California Water Code

Water Code Sections 10656 and 10657 restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources. In addition, Water Code Section 10910 describes the WSA that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of consultation in which to provide a WSA to the CEQA lead agency. Water Code Section 10910 also specifies the circumstances under which a project for which a WSA was once prepared would be required to obtain another assessment. Water Code Section 10631, directs that contents of the urban water management plans include further information on future water supply projects and programs and groundwater supplies.

Urban Water Management Planning Act – Assembly Bill 797

The Urban Water Management Planning Act was established by AB 797 (AB 707) on September 21, 1983. Passage of this law was recognition by state legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The law requires water suppliers in California, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 AFY of water, to prepare and adopt a specific plan every 5 years, which defines their current and future water use, sources of supply and its reliability, and existing conservation measures.

Sustainable Groundwater Management Act

“In September 2014, California Governor Jerry Brown signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA) into law. SGMA establishes a framework for local groundwater management and requires local agencies to bring overdrafted basins into balanced levels of pumping and recharge. The California Statewide Groundwater Elevation Model (CASGEM) Priority List ranks groundwater basins across the state with assessment rankings of High, Medium, Low, or Very Low. [The California Department of Water Resources] DWR identifies the Tule Subbasin as a High Priority, critically overdrafted groundwater basin (Eastern Tule GSA 2019).

To satisfy the requirements of SGMA, six activities are required for the Tule Subbasin:

1. One or multiple Groundwater Sustainability Agencies(s) (GSA) must fully cover the Tule Subbasin, beginning June 30, 2017;
2. One or more Groundwater Sustainability Plan(s) (GSP) must be developed and adopted by the GSA(s) and fully cover the Tule Subbasin, beginning January 31, 2020;
3. If multiple GSPs are adopted within the Tule Subbasin, they must be coordinated via Coordination Agreement by the time they are submitted to DWR, no later than January 31, 2020;

4. DWR must determine that the GSP(s) is/are “adequate” and satisfy the requirements set forth in SGMA;
5. All adopted GSPs covering the Tule Subbasin must be implemented in a manner that achieves the Tule Subbasin’s sustainability goal and avoids significant and unreasonable undesirable results; and
6. GSAs must provide regular reporting to the DWR, pursuant the requirements outlined in SGMA.

DWR identifies the Kern County Subbasin as a High priority basin. The Subbasin includes four GSAs submitting individual GSPs.

Local

Tulare County General Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

PFS-2.3 Well Testing. The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.5 New Systems or Individual Wells. Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.

PFS-3.1 Private Sewage Disposal Standards. The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.4 Alternative Rural Wastewater Systems. The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-4.1Stormwater Management Plans. The County shall oversee, as per Community Plan Content Table PF-2.1 and Specific Plan Content, Hamlet Plans Policy PF-3.3, and Table LU-4.3, the preparation and adoption of stormwater management plans for communities and hamlets to reduce flood risk, protect soils from erosion, control stormwater, and minimize impacts on existing drainage facilities, and develop funding mechanisms as a part of the Community Plan and Hamlet Plan process.

PFS-4.3 Development Requirements. The County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance.

PFS-4.4 Stormwater Retention Facilities. The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge.

PFS-4.5 Detention/Retention Basins Design. The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible.

PFS-4.7 NPDES Enforcement. The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.3 Solid Waste Reduction. The County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs.

PFS-5.8 Hazardous Waste Disposal Capabilities. The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

Tulare County Construction and Debris Ordinance

"On January 24, 2006, the Tulare County Board of Supervisors adopted the Construction and Demolition (C&D) Ordinance establishing regulations for the recycling and diversion of C&D debris within the unincorporated area of the County. This Ordinance becomes effective March 1, 2006 and assists Tulare County in reaching the 50% waste diversion mandate required by the California Integrated Waste Management Board.

Prior to the issuance of a permit, every Applicant for a building or demolition permit involving any Covered Project shall submit a properly completed C&D Debris Recycling and Reuse Plan to the Tulare County Resource Management Agency's Permit Center. A C&D Debris Recycling and Reuse Final Compliance report will also be required within 30 days after project completion."[14]

3.19.6 Impact Evaluation

Would the Project:

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?

Project Impact Analysis: ***No Impact***

Wastewater Facilities. The proposed Project will generate a minimal volume of wastewater during construction-related activities. During construction-related activities, wastewater will be contained within portable toilet facilities and properly disposed of at an approved site. A standard on-site septic tank and leach field may be used at the O&M building (if constructed on-site) to dispose sanitary wastewater, which will be designed to meet operation and maintenance guidelines required by Tulare County laws, ordinances, regulations, and standards. The proposed Project will not require or include any new sewer connections or require the construction or relocation of new wastewater facilities. Thus, ***No Impact*** will occur.

Storm Water Facilities. The proposed Project does not require expanded or new storm drainage facilities because the proposed solar facility will not generate a significant increase in the amount

[14] Tulare County Solid Waste Department. Construction & Demolition Debris. https://tularecounty.ca.gov/solidwaste/index.cfm/c-d/

of impervious surfaces that will increase runoff during storm events. Water from solar panel washing will continue to percolate through the ground, as a majority of the surfaces within the Project site will remain pervious, or evaporate depending upon seasonal temperature variations. The proposed Project will not require or result in the relocation or construction of new or expanded storm water facilities. Thus, ***No Impact*** will occur.

Water Facilities. The proposed Project is not anticipated to result in a significant increase in water demand/use; however, water will be needed during construction-related activities for site preparation such as soil compaction, grading, and to control dust generated by disturbances of soil during construction-related activities consistent with the San Joaquin Valley Air Pollution Control District's Regulation VIII (Fugitive PM_{10} Prohibitions). During operations, water will be required for fire suppression, solar panel washing, and operation of the proposed O&M building. Water necessary for construction-, decommissioning-, and operational-related activities will be supplied from an existing on-site or off-site well. Therefore, the proposed Project will not require or result in the relocation or construction of new or expanded water facilities. Thus, ***No Impact*** will occur.

Power, Natural Gas, and Telecommunication Facilities. The proposed Project involves the construction of a 700 MW solar facility and transmission and/or collection lines. However, these are components of the Project as evaluated in the Draft EIR. The proposed Project will not otherwise generate the demand for, or require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities., result in a significant impact to the environment. Thus, ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the Project will not result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, there will be ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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

Project Impact Analysis: ***Less than Significant Impact***

Water Demand. During the construction period of up to 24 months, the proposed Project will use up to approximately 400 acre-feet of water for construction activities. Operational water demands, which include water used for fire suppression, solar PV panel washing, and operation of the proposed O&M building, is estimated at total approximately 50 Acre Feet per Year (AFY).

As shown in **Table 3.19-1**, the proposed Project's amortized annual water demand (i.e., the average annual water demand over the 35-year lifespan of the proposed Project) is estimated to be approximately 61.4 AFY.

Table 3.19-1. Project Water Use Scenarios[15]

Project Phase	Water Demand (AFY)
Construction Demand[1]	200
Operational Demand	50
Total Annual Demand Amortized Over 35-Year Lifespan	**61.4**

AFY – acre-feet per year
1 – Construction will occur over a period of up to two years, totaling 400 acre-feet in construction water demand.

The Project area is located in an area that has historically supported agricultural production, and although the site is not currently irrigated, it has been in the past. Previous irrigation water was provided via groundwater pumped on site (from the Tule Subbasin). Implementation of the proposed Project will replace past, present, or future (that is, during the life of the Project) agricultural water uses on the Project area, and therefore, based on the nature of the Project, will result in a decreased operational water demand on the Project area.

Water Supply Reliability. The proposed Project will source water from one or more of the following water sources: pumped from an on- or off-site groundwater well in the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin or purchased imported water from the Kern-Tulare Water District.

"The San Joaquin Valley Groundwater Basin is not currently adjudicated, and groundwater supplies are managed through implementation of GSPs under SGMA, as well as IRWMPs. Based on information provided in the applicable GSPs, sufficient groundwater supply is available to meet the construction and operational requirements of the proposed Project."

The Eastern Tule GSA, in coordination with the other GSAs in the Tule Subbasin, has established a Subbasin Sustainability Goal to achieve no long-term change in groundwater storage by year 2040. The GSP identifies a series of projects and management actions that will allow for the Eastern Tule GSA (in coordination with the other Tule Subbasin GSAs) to achieve the Tule Subbasin Sustainability Goal. The Tule Subbasin's projected 2040-2050 "sustainable yield" (average rate of groundwater use that can be maintained without endangering the long-term quality or quantity of water in the basin) suggests that with implementation of management actions and programs identified in the Eastern Tule GSP, overdraft conditions in the Tule Subbasin will recover, thereby improving water supply reliability.[16]

[15] "*Rexford Solar Project Water Supply Assessment*"." Table 1. Page 8. Prepared by Rincon and included in Appendix "K" of this EIR.
[16] Ibid. Pages 22-24.

Similar to the Tule Subbasin, "it is reasonable to anticipate that water supply reliability in the Kern County Subbasin is improving with implementation of groundwater management efforts including compliance with SGMA. The [Kern Groundwater Authority] KGA, in coordination with the other GSAs in the Subbasin, established in its GSP a sustainability goal for the Subbasin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline of 2020. The Kern County Subbasin Sustainability Goal is to:

- Achieve sustainable groundwater management in the Kern County Subbasin through the implementation of projects and management actions at the member agency level of each GSA
- Maintain its groundwater use within the sustainable yield of the basin as demonstrated by monitoring and reporting groundwater conditions
- Operate within the established sustainable management criteria, which are based on the collective technical information presented in the GSPs in the Subbasin
- Collectively bring the Subbasin into sustainability and to maintain sustainability over the implementation and planning horizon

The KGA GSP identifies a list of over 150 projects and management actions designed to maintain or achieve sustainability within the Subbasin. Projects include: expansion of local and regional conveyance and recharge facilities to take advantage of surplus supplies; new conveyance and recharge projects; and participation in the California Water Fix or other thru-Delta improvement projects. Management actions include: implementation of district level fee structures to incentivize reduced groundwater pumping; participation in local, regional, and state-wide water markets; and setting allocations for groundwater use by landowners based on the sustainable yield of the management area.

Should the Proposed Project use water pumped from the Kern County Subbasin to support the proposed Project, such use will be consistent with management direction provided in the KGA GSP."[17]

"If imported surface water supply is used to support the Project needs, such use will occur in compliance with management of the KTWD, which has sufficient water supply available to support existing and anticipated demands within its jurisdiction. The proposed Project is not specifically identified as a future demand within the KTWD jurisdiction; however, the proposed Project will replace historical and future agricultural uses on the Project area that may otherwise have relied on the KTWD for water supply. Although regional water shortages may occur in the area during the Project's lifetime, such conditions may occur regardless of the proposed solar development.

In conclusion, sufficient water supply is available to meet the water demands of the proposed Project." [18] Based on this analysis, this will result in a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County, San Joaquin Valley Groundwater Basin, and KTWD service area.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the Project will have sufficient water

[17] Ibid. Page 24.
[18] Ibid. Page 27.

supply is available to meet the water demands of the proposed Project and will result in a less than significant impact. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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?

Project Impact Analysis: ***No Impact***

The proposed Project will generate a minimal volume of wastewater during construction-related activities. During construction-related activities, wastewater will be contained within portable toilet facilities and properly disposed of at an approved site. A standard on-site septic tank and leach field may be used at the O&M building (if constructed on-site) to dispose sanitary wastewater, which will be designed to meet operation and maintenance guidelines required by Tulare County laws, ordinances, regulations, and standards. Therefore, no connections to a wastewater treatment provider are proposed or required. ***No Impact*** will occur related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As described above, a standard on-site septic tank and leach field may be used at the O&M building (if constructed on-site) to dispose sanitary wastewater. Therefore, no connections to a wastewater treatment provider are proposed or required. ***No Cumulative Impact*** will occur related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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 reduction goals?

Project Impact Analysis: ***Less than Significant Impact***

The proposed Project is not anticipated to generate large volumes of solid waste during construction, operation-, or decommissioning-related activities. Non-hazardous waste generated during construction-related activities will consist mostly of general construction-related materials such as concrete, wood, brick, glass, plastics, scrap metal, and similar materials. Construction-related waste generated at the Project site will be sorted into recyclables and non-recyclables and stored in dumpsters which will be serviced by a licensed solid-waste hauler.

California's Green Building Standards Code (CALGreen; Title 24 Cal. Code Regs., Part 11) requires that nonresidential building projects recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, or meet a local construction and demolition waste management ordinance, whichever is more stringent (§ 5.408.1). The Tulare County Construction and Demolition (C&D) Ordinance, will require the Applicant to divert 100 percent of inert waste and 50 percent of all other waste, prepare and implement a C&D Debris Recycling and Reuse Plan, and develop a C&D Debris Recycling and Reuse Compliance report to be submitted after Project completion.[19] In order to obtain a building permit, the Applicant will be required to comply with the Tulare County C&D Ordinance. By diverting 100 percent of inert waste and 50 percent of all other waste, the Applicant will not generate waste in excess of state or local standards.

Any waste that cannot be recycled will be transported to the Tulare County Solid Waste Department-operated Teapot Dome Landfill located near Porterville. According to CalRecycle, Teapot Dome Landfill is permitted to accept 800 tons per day of solid waste. The landfill has a remaining capacity of 712,861 cubic yards out of a total maximum capacity of 8,320,307 cubic yards and has an estimated closure date of 2022.[20] The proposed Project is not anticipated to generate a significant amount of solid waste and Teapot Dome is anticipated to have sufficient space to accommodate the Project needs through construction-related activities. In the event that Teapot Dome is either closed or at capacity the waste could be transported to the Visalia Disposal or Woodville Landfill. The Visalia Disposal Site is permitted to accept 2,000 tons per day and has a total permitted capacity of 18,630,666 cubic yards. The Visalia Disposal Site has a remaining capacity of 14,815,501 cubic yards and has an estimated closure date of 2024.[21] Woodville Landfill is planned for reinitialization of operations in 2021-2022. Although currently inoperative, Woodville Landfill is currently permitted to accept approximately 900 tons per day (tpd), although the site is permitted for 1,078 tpd. The increase in acreage will also result in an increase to the permitted landfill capacity by approximately 14.0 million cubic yards for an overall capacity of the Woodville Landfill to approximately 27.5 million cubic yards. The additional Waste Management Units (WMUs) will be designated Class III landfill units and will extend the anticipated landfill closure date by 55 years (to approximately Year 2074).[22]

If, and when, Project decommissioning occurs, facility equipment and structures will be removed in order to return the Project site to its pre-construction condition. A collection and recycling program will be executed to promote the recycling of Project components and minimize disposal of Project components in landfills. Therefore, the Project is anticipated to generate a minimal amount of waste during decommissioning-related activities. The Project has an anticipated lifetime of approximately 35 years. Therefore, at the time of decommissioning, it is likely that solid waste generated at the Project site will be transported to Woodville Landfill as it will have an estimated lifetime to the Year 2074.

[19] Tulare County Solid Waste Department. Construction & Demolition Debris. https://tularecounty.ca.gov/solidwaste/index.cfm/c-d/

[20] CalRecycle. Solid Waste Information System (SWIS) Facility Detail – Teapot Dome Disposal Site (54-AA-0004). https://www2.calrecycle.ca.gov/swfacilities/Directory/54-AA-0004/. Accessed March 2020.

[21] Ibid. SWIS Detail – Visalia Disposal Site (54-AA-0009). https://www2.calrecycle.ca.gov/swfacilities/Directory/54-AA-0009. Accessed March 2020.

[22] Telephone conversation between Mr. Jonah Trevino, Supervisor, Tulare County Solid Waste Department. January, 2019 and Mr. Hector Guerra, Chief Environmental Planner, Economic Development and Planning Branch, Tulare County Resource Management Agency.

During O&M-related activities, the Project will generate a small amount of waste associated with maintenance activities, such as broken or rusted metal, defective or malfunctioning equipment, electrical materials, empty containers, other miscellaneous solid waste, and typical refuse from the O&M staff. Up to one (1) cubic yard of waste per week will be accumulated in an on-site dumpster that will be collected weekly by a commercial waste management service.

Based on these considerations, the proposed Project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. See also Section 3.15 Public Services. As such, the Project will result in a ***Less than Significant Impact***.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the proposed Project is not anticipated to generate large volumes of solid waste during construction, operation-, or decommissioning-related activities. The Project Applicant will be required to comply with the Tulare County C&D Ordinance and state regulations (e.g., mandates), as applicable. Furthermore, a collection and recycling program will be implemented to promote the recycling of Project components and minimize disposal of Project components in landfills. The proposed Project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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

Project Impact Analysis: ***No Impact***

Waste generated during Project construction-, operation-, or decommissioning-related activities will be recycled or disposed of in a manner that is consistent with all applicable federal, state, and local recycling reduction and waste mandates, requirements, and policies. Therefore, the Project will not result in any impacts related to conflicts with statutes and regulations regarding solid waste.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the Project will not result in any impacts related to conflicts with statutes and regulations regarding solid waste. Therefore, ***No Cumulative Impact*** will occur related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

3.20 Wildfire

3.20.1 Summary of Findings

The proposed Project will result in a ***Less Than Significant Impact*** related to Wildfire. A detailed review of potential impacts is provided in the following analysis.

3.20.2 Introduction

CEQA Requirements

As contained in the Proposed Updates to the CEQA Guidelines (finalized in November 2018), "Senate Bill 1241 (Kehoe, 2012) requires the Office of Planning and Research, the Natural Resources Agency, and CalFire to develop "amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code." (Pub. Resources Code, § 21083.01 (emphasis added).)"[1]

As noted in CEQA Guidelines Section 15126.2(a), "[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[2]

To provide an explanation on why it determined that analyzing potential impacts resulting from wildfire, the California Natural Resources Agency ("Natural Resources Agency" or "Agency) provided a document titled the "*Final Statement of Reasons For Regulation Action Amendments to the State CEQA Guidelines*" ("Final Statement of Reasons"). The amendments address legislative changes to the California Environmental Quality Act (CEQA), clarify certain portions of the existing CEQA Guidelines, and update the CEQA Guidelines to be consistent with recent court decisions. As noted in the Final Statement of Reasons, "The CEQA Guidelines are unique among administrative

[1] Governor's Office of Planning and Research. Proposed Updates to the CEQA Guidelines. Final. November 2017. Page 36. http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf. Accessed March 2020.

[2] CEQA Guidelines, Section 15126.2(a).

regulations. They provide a carefully organized, step-by-step guide to the environmental review process. As a result, rather than turning to the statute and case law, many agency staff and planners look to the CEQA Guidelines as a comprehensive source of information regarding CEQA's requirements."[3]

In the Final Statement of Reasons document, specifically at "12. CEQA Requires Analysis of the Potential Impacts Associated with Wildfire", the Agency writes, "Some comments suggested that the Agency should not include questions in Appendix G related to wildfire. In part, those comments suggested that the California Supreme Court's decision in CBIA v. BAAQMD (2015) 62 Cal.4th 369 precludes the analysis of such hazards on proposed projects. The Agency disagrees. In that decision, the Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." (Id. at p. 377 (emphasis added).) The Court's opinion also included a significant caveat: "[w]hen a proposed project risks exacerbating those environmental hazards or conditions that already exist an agency must analyze the potential impact of such hazards on future residents or users." (Id., at p. 377.)

In this context, an effect that a project "risks exacerbating" is similar to an "indirect" effect. Describing "indirect effects," the CEQA Guidelines state: "If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment." (CEQA Guidelines, § 15064, (d)(2).) Just as with indirect effects, a lead agency should confine its analysis of exacerbating effects to those that are reasonably foreseeable. (Id. at subdivision (d)(3).)

In the context of wildfire, it is clear that development may exacerbate wildfire risks. OPR's General Plan Guidelines, for example, includes an extensive discussion of the interaction between development and wildfire risk areas, including the "wildland-urban interface." While wildfire risk already exists in such areas, bringing development to those areas makes the risk worse, and not just for fire risk. Recent research explains:

> The close proximity of houses and wildland vegetation does more than increase fire risk. As houses are built in the WUI, native vegetation is lost and fragmented; landscaping introduces nonnative species and soils are disturbed, causing nonnatives to spread; pets kill large quantities of wildlife; and zoonotic disease, such as Lyme disease, are transmitted.

[3] California Natural Resources Agency Final Statement of Reasons For Regulation Action Amendments to the State CEQA Guideline OAL Notice File No. Z-2018-0116-12. November 2018. Page 2. http://resources.ca.gov/ceqa/docs/2018_CEQA_Final_Statement_of%20Reasons_111218.pdf. Accessed March 2020.

(Radeloff, et al., "Rapid growth of the US wildland-urban interface raises wildfire risk," PROC NATL ACAD SCI USA (March 27, 2018) 115 (13) 3314-3319 [citations omitted].) Not all development types are likely to create the same risks, however:

> The recognition that homes are vulnerable to wildfire in the wildland-urban interface (WUI) has been established for decades… Analysis of hundreds of homes that burned in southern California the last decade showed that housing arrangement and location strongly influence fire risk, particularly through housing density and spacing, location along the perimeter of development, slope, and fire history. Although high-density structure-to-structure loss can occur, structures in areas with low-to-intermediate housing density were most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access. Fire frequency also tends to be highest at low to intermediate housing density, at least in regions where humans are the primary cause of ignitions.

(Syphard AD, Bar Massada A, Butsic V, Keeley JE (2013) "Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss." PLoS ONE 8(8): e71708. https://doi.org/10.1371/journal.pone.0071708 [citations omitted].) In other words, low-density, leapfrog development may create higher fire risk than high-density, infill development.

Notably, Senate Bill 1241 (Kehoe, 2012) specifically required the Agency to update Appendix G with questions related to wildfire risk. One could view wildfire as a specific legislatively-created exception to the general rule the Court described in the CBIA decision, though the Court did not specifically analyze its provisions. In any event, the Agency drafted the questions in the new wildfire section to focus on the effects of new projects in creating or exacerbating wildfire risks."[4]

Thereafter, the CEQA Checklist was updated to include questions related to fire hazard impacts for projects located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The Wildfire section addresses factors that could expose people or structures to fire or post-fire flooding or landslides, risk or impair emergency response, or require installation of infrastructure that could exacerbate fire risk.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance:

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, a project would have a significant impact if it would:

- Impair an adopted emergency response plan or emergency evacuation plan.
- Exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- 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.
- 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.

[4] Ibid. Pages 86 and 87.

3.20.3 Environmental Setting

"A wildfire is an uncontrolled fire spreading through vegetative fuels. Wildfires can be caused by human activities (such as arson or campfires) or by natural events (such as lightning). Wildfires often occur in forests or other areas with ample vegetation. Wildfires differ from other fires due to their large size, the speed at which the fires can spread, and the ability of the fire to change direction unexpectedly and to jump gaps, such as roads, rivers, and fire breaks. In areas where structures and other human development meet or intermingle with wildland or vegetative fuels (referred to as the wildland urban interface or WUI), wildfires can cause significant property damage and present extreme threats to public health and safety. The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas.

Topography: As slope increases, the rate of wildfire spread increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridgetops may mark the end of wildfire spread because fire spreads more slowly or may even be unable to spread downhill.

Fuel: The type and condition of vegetation plays a significant role in the occurrence and spread of wildfires. Certain types of plants are more susceptible to burning or will burn with greater intensity, and non-native plants may be more susceptible to burning than native species. Dense or overgrown vegetation increases the amount of fuel load. The ratio of living to dead plant matter is also important. The risk of fire increases significantly during periods of prolonged drought, as the moisture content of both living and dead plant matter decreases; or when a disease or infestation has caused widespread damage. The fuel's continuity, both horizontally and vertically, is also an important factor.

Weather: The most variable factor affecting the behavior of wildfires is weather. Temperature, humidity, wind, and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity often signal reduced wildfire occurrence and easier containment. Years of precipitation followed by warmer years tend to encourage more widespread fires and longer burn periods. Also, since the mid-1980s, earlier snowmelt and associated warming due to global climate change has been associated with longer and more severe wildfire seasons in the western U.S.

Wildfires can have serious effects on the local environment, beyond the removal of vegetation. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards, as described above. Wildfires can also greatly affect the air quality of the surrounding area.

History: Historical information between 1910 and 2014 indicates that 610 wildfires occurred in the County which burned approximately 1,328,000 acres during this 104-year time period. The following causes represent approximately 95% of the 610 recorded wildfires (approximately 1.3 million acres), and are included as follows: miscellaneous 36% (532,800 acres); lightning 27% (309,000 acres); unknown or unidentified 14% (97,000 acres); arson 8% (63,300 acres); equipment use 5% (43,500 acres); smoking 3% (53,400 acres); and campfires 2% (184,600 acres). The remaining causes which include escaped prescribed burns, debris, vehicles, structures, power-lines, railroads and playing with fire account for the remaining 5% (44,400 acres) of the recorded wildfires. Appendix C [of the Tulare County 2017 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP)] lists documented fires over 1000 acres that have burned in the County since 1985.

Location: Public Resources Code 4201-4204 and Government Code 51175-89 directed CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones are referred to as fire hazard severity zones and represented as very high, high and moderate. Specifically, the maps were created using data and models describing development patterns, potential fuels over a 30- to 50-year time horizon, expected fire behavior and expected burn probabilities. The maps are divided into local responsibility areas and State responsibility areas.

Local responsibility areas generally include incorporated cities, cultivated agriculture lands and portions of the desert. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to the local government. The fire hazard severity zones for the area of local responsibility in the County are shown on Figure B-4 (Appendix B, Hazard Figures [in the MJLHMP). Fire severity zones are depicted for the Cities of Porterville and Woodlake in Figures B-13 and B-20 (Appendix B, Hazard Figures MJLHMP).

State responsibility area is a legal term defining the area where the State has financial responsibility for wildfire protection. Incorporated cities and Federal ownership are not included. The prevention and suppression of fires in all areas that are not State responsibility areas are primarily the responsibility of local or Federal agencies.

The portion of the County that transitions from the valley floor into the foothills and mountains is characterized by high to very high threat of wildfire; this includes the cities of Porterville and Woodlake, the jurisdiction of Tulare County Office of Education (TCOE), the Tule River Tribe Reservation and areas of the County unincorporated. Steeper terrain in these areas increases the threat of wildfire. The western portion of the County has little or no threat of wildfire. The risk of wildfire increases where human access exists in high fire hazard severity zones, such as the Sierra Nevada Mountains and foothills, because of a greater chance for human carelessness and because of historic and current fire management practices.

Impact of Climate Change: Climate and weather have long been acknowledged as playing key roles in wildfire activity, and global warming is expected to exacerbate fire impacts on natural and urban ecosystems. Predicting future fire regimes requires an understanding of how temperature and precipitation interact to control fire activity.7 Since 2012, record drought and record temperatures, have weakened trees throughout California, resulting in millions of acres of failing forestland that then become vulnerable to disease and infestation. Infestations, such as those caused by native bark beetles, have caused tree mortality of epidemic proportions. The scale of tree mortality in California contributes to significantly increased wildfire risks, and presents life safety risks due to falling trees that can injure or kill people. The immediate consequence of tree mortality on California forestlands increases the potential for wildfires, further spread of forest insect tree damage, threats to critical public safety infrastructure from falling trees, reduced forest carbon stocks, loss of commercial timber values to landowners, and diminished wildlife habitat. Due to these increased risks, the County proclaimed states of emergency for tree mortality.

In addition, and in response to the millions of dead trees, a State of Emergency Proclamation was issued by the Governor. A Tree Mortality Task Force, comprised of State and Federal agencies led by CAL FIRE, Cal OES and the Governor’s office has identified six counties as high hazard zones due to dead and dying trees and the hazards, this tree mortality presents. The 10 counties include: Amadore, Calaveras, El Dorado, Fresno, Kern, Madera, Mariposa, Placer, Tulare, and Tuolumne. Both the State's and the County's Tree Mortality Task Forces are structured as a Multi-Agency Coordination Group and meet monthly to exchange information and updates among stakeholders. Participants are

encouraged to discuss needs and concerns, and leverage each other's subject matter expertise and resources to further response efforts.

Extent: CAL FIRE has classified 22% of the County as high wildfire hazard areas and an additional 27% as very high wildfire hazard areas. These areas are primarily in the foothills and mountain regions in the eastern portion of the County and to a large extent on National Forest or National Park land. Figure B- [in the MJLHMP] depicts the fire severity rating for areas of the County.

Probability of Future Events: Based on historical events, on average, slightly more than one wildfire of over 1000 acres burns within the County each year. Therefore, it is highly likely that a wildfire event will occur within the calendar year impacting the County. Wildfire events have a greater than 1 in 1-year (100%) chance of occurring."[5]

3.20.4 Existing Conditions

Fire Hazard Severity Zones

According to the Fire Hazard Severity Zones map published by the California Department of Forestry and Fire Protection (Cal Fire)[6] and shown in **Figure 3.20-1**, a majority of the Project site located east of State Route 65 is within a State Responsibility Area classified as having moderate potential for wildfires. The remainder of the Project site has not been zoned for fire severity by Cal Fire.

Vegetation (Fuel)

The majority of the Project site (93 percent) is comprised of active agricultural fields (containing crops or recently disked), fallow agricultural fields (fields in state of reversion back to non-native grassland), and developed areas (roads, agricultural infrastructure). The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures.

Slope

The Project site is located on the Valley floor in a predominantly rural, agricultural area on relatively flat land (i.e., 0-2% slopes).

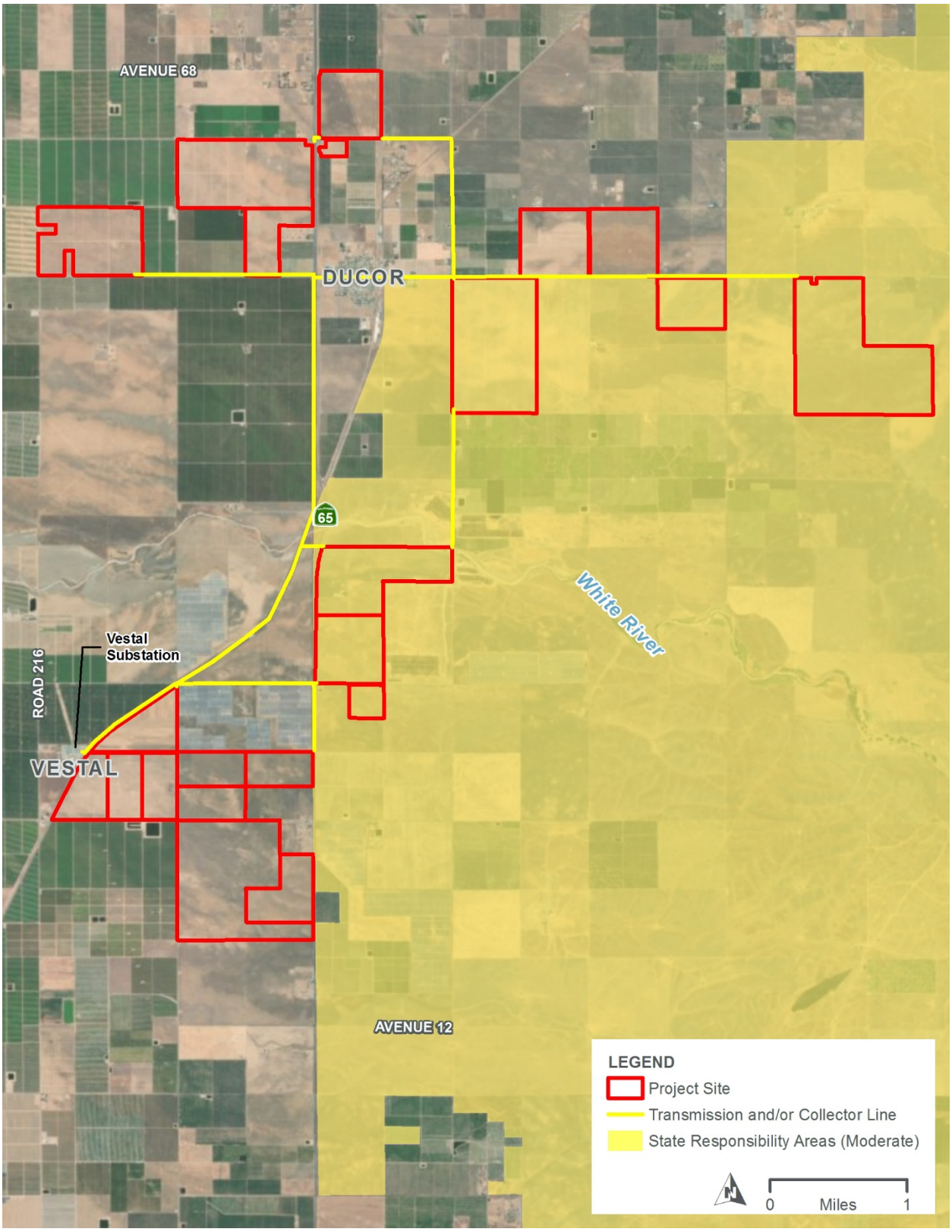
Flood Hazard

According to the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (Map Number 06107C1975E and 06107C2325E), the majority of the Project site is located within Zone X. Zone X is an area determined to be outside the 0.2 percent annual chance floodplain. Portions of the solar farm site (APNs 339-050-004, 339-050-013, and 339-070-026) and transmission/collector line near the White River are mapped as Zone A. Zone A is an area subject to a 1 percent or greater annual chance of flooding in any given year.

[5] Tulare County 2018 Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP). March 2018. Pages 70-72. http://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/. Accessed March 2020.

[6] California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA – Tulare County. https://osfm.fire.ca.gov/media/6830/fhszs_map54.pdf. Accessed March 2020.

Figure 3.20-1. Fire Hazard Severity Zone – State Responsibility Area



3.20.5 Regulatory Setting

State

Senate Bill 1241

"Wildfire: Senate Bill 1241 (Kehoe, 2012) required the Office of Planning and Research, the Natural Resources Agency, and CalFire to develop "amendments to the initial study checklist of the [CEQA Guidelines] for the inclusion of questions related to fire hazard impacts for projects located on lands classified as state responsibility areas, as defined in section 4102, and on lands classified as very high fire hazard severity zones, as defined in subdivision (i) of section 51177 of the Government Code." (Pub. Resources Code, § 21083.01 (emphasis added).) The Agency added several questions addressing this issue. Notably, while SB 1241 required the questions to address specific locations, it did not necessarily limit the analysis to those locations, and so the Agency posed the questions for projects located within "or near" those zones. Lead agencies will be best placed to determine precisely where such analysis is needed outside of the specified zones."[7]

"The safety elements of local general plans will also describe potential hazards, including: "any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards …, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires." (Gov. Code § 65302(g)(1).) Hazards associated with flooding, wildfire and climate change require special consideration. (Id. at subd. (g)(2)-(g)(4).) Lead agencies must "discuss any inconsistencies between the proposed project and applicable general plans" related to a project's potential environmental impacts in a project's environmental review. (State CEQA Guidelines § 15125(d).) Local governments may regulate land use to protect public health and welfare pursuant to their police power. (Cal. Const., art. XI, § 7; California Building Industry Assn. v. City of San Jose (2015) 61 Cal. 4th 435, 455 ("so long as a land use restriction or regulation bears a reasonable relationship to the public welfare, the restriction or regulation is constitutionally permissible").)"[8]

CAL FIRE – Tulare Unit Strategic Fire Plan

As summarized in the 2018 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP), "The Plan is a local road map to create and maintain defensible landscapes in order to protect vital assets. It seeks to reduce firefighting cost and property loss, increase public and firefighter safety, minimize wildfire risk to communities and contribute to ecosystem health. The Plan identifies pre-suppression projects including opportunities for reducing structural ignitability, and the identification of potential fuel reduction projects and techniques for minimizing those risks. The central goals that are critical to reducing and preventing the impacts of fire revolve around both suppression efforts and fire prevention efforts. The MJLHMP fire hazard analysis and fire related mitigation measures will be provided to Cal Fire to support the Tulare Unit Strategic Fire Plan."[9]

Cal Fire publishes Fire Hazard Severity Zone Maps for all regions in California. The fire hazard measurement used as the basis for these maps includes the speed at which a wildfire moves, the

[7] Ibid (n 3). Page 70.

[8] Ibid (n 3). Pages 38 and 39.

[9] 2018 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan; Section 3. Page 15. https://oes.tularecounty.ca.gov/oes/index.cfm/mitigation/tulare-county-mjlhmp/

amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front. Lead agencies and project proponents can review the Cal Fire maps to determine whether a given project site will be subject to the new CEQA wildfire impacts analysis.

Local

Tulare County Health and Safety Element

During the update of the Health and Safety Element (H&S Element), the County was compelled to comply with AB 162 (regarding flooding) and SB 5 (flood hazard mapping). Wildfire can directly contribute to potential flooding opportunities as vegetation that would otherwise provide soil stability could be removed to the extent that exposed soil is vulnerable to land- or mudslides. Such events could subsequently damage/destroy structures (such as buildings), roadways, telecommunications towers, utility lines, etc., or result in land- or mudslide debris (e.g., vegetation, soil, destroyed structures, etc.) entering watercourses such as streams, rivers, lakes, etc. which could damage/destroy habitat, water quality, bridges, shorelines, etc.

As such, the Health and Safety Element addresses AB 162 and SB 5 by including Policies (Section 10.5 Flood Hazards and 10.6 Wildland Fire Hazards) and Implementation Measures in Section 10.10. It also contains the following narrative: “Assembly Bill 162 (AB 162), adopted in 2007, amended Government Code Section 65302(d)(3) and (g)(2)) to require cities and counties to identify information regarding flood hazards upon revision of the jurisdiction's housing element on or after January 1, 2009. The requirements of Government Code Section 65302 (d)(3) and (g)(2)(A) are addressed in this General Plan Update as follows: Figure 10-1 (Flood Hazards and Faults [in the H&S Element]) displays information based on historic and current data regarding flood waters.

Figure 10-1 [in the H&S Element] shows:

1. The flood hazard zones (i.e. 100 and 500 Year Flood Zones) from the National Flood Insurance Rate maps published by Federal Emergency Management Agency (FEMA);
2. The dam failure inundation maps prepared pursuant to Section 8589.5 that are available from California Emergency Management Agency;
3. The California Department of Water Resources (DWR) Awareness Floodplain Mapping Program maps.

Figure 10-2 (Fire Threat [in the H&S Element]) shows:

1. Data on areas vulnerable to wildfire; and,
2. Urban development boundaries, hamlet development boundaries, and mountain service centers where existing and planned development will occur including structures, roads, utilities, and essential public facilities.

Used in conjunction, Figures 10-1 and 10-2 [in the H&S Element] show areas where FEMA flood zones and fire threats overlap to identify areas vulnerable to flooding after wildfires. The figures also show where flood hazard zones are within these urban boundaries.”[10]

[10] Tulare County Health and Safety Element Goals and Policies Report. Page 10-3. http://generalplan.co.tulare.ca.us/documents/GP/002Board%20of%20Supervisors%20Materials/001BOS%20Agenda%20Items%20-%20Public%20Hearing%20August,%2028%202012/008Attachment%20G.%20Public%20Comment,%20%20Staff%20Matrix,%20and%20Responses/004Item%204.%20GPU%20AMUS/17-CHP%2010%20Health%20&%20Safety.pdf

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

HS-6.1 New Building Fire Hazards. The County shall ensure that all building permits in urban areas, as well as areas with potential for wildland fires, are reviewed by the County Fire Chief.

HS-6.5 Fire Risk Recommendations. The County shall encourage the County Fire Chief to make recommendations to property owners regarding hazards associated with the use of materials, types of structures, location of structures and subdivisions, road widths, location of fire hydrants, water supply, and other important considerations regarding fire hazard that may be technically feasible but not included in present ordinances or policies.

HS-6.7 Water Supply System. The County shall require that water supply systems be adequate to serve the size and configuration of land developments, including satisfying fire flow requirements. Standards as set forth in the subdivision ordinance shall be maintained and improved as necessary.

HS-7.1 Coordinate Emergency Response Services with Government Agencies. The County shall coordinate emergency response with local, State, and Federal governmental agencies, community organizations, volunteer agencies, and other response partners during emergencies or disasters utilizing SEMS and NIMS.

HS-7.2 Mutual Aid Agreement. The County shall participate in established local, State, and Federal mutual aid systems. Where necessary and appropriate, the County shall enter into agreements to ensure the effective provision of emergency services, such as mass care, heavy rescue, hazardous materials, or other specialized function.

3.20.6 Impact Evaluation

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Project Impact Analysis: ***No Impact***

The Project site is not classified as being within a high fire hazard severity zone. As shown in **Figure 3.20-1**, a majority of the Project site located east of State Route 65 within a State Responsibility Area classified as having moderate potential for wildfires. The remainder of the Project site has not been zoned for fire severity by Cal Fire.

The proposed Project is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The Project site is located on the Valley floor in a predominantly rural, agricultural area with limited population. Construction and operation of the Project will not require closures of existing public roads and will not significantly affect current levels of service on area roads. The Project is not located in an area where it could restrict access to evacuation routes, shelter sites for nearby populations. The Project will not impair access to or operation of the Emergency Command Center as no roads will be blocked during construction-related activities. Also, in compliance with applicable Fire Code and Building Code requirements, construction and maintenance/operations managers and personnel will be trained in fire prevention and emergency response. Fire suppression equipment specific to construction will be maintained on site. Additionally, Project construction and maintenance/operations will comply with applicable existing codes and ordinances related to the maintenance of mechanical

equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the Project will not conflict with the implementation of, or physical interference with, an adopted emergency response plan or emergency evacuation plan. Therefore, ***No Impact*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the Project will not conflict with the implementation of, or physical interference with, an adopted emergency response plan or emergency evacuation plan. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this resource will occur.

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 uncontrolled spread of a wildfire?

Project Impact Analysis: ***Less than Significant Impact***

Slope and wind speed can influence the spread of fires. The Project site has low topographic relief and is relatively flat. The proposed Project will introduce temporary onsite employees during construction-related activities and up to 20 full-time employees during operations.

During construction-related activities the presence of construction-related equipment and vehicles, which could cause a spark, could result in a slight increase in the risk of ignition. However, the proposed Project is not located within a high or very high fire hazard severity zone. Additionally, the Project site characteristics such as the slope (flat) and the vegetation type (fallow agricultural fields and agricultural fields) do not make the Project site a high-risk area for wildland fire. Also, according to the Tulare County 2018 MJLHMP, out of the 610 wildfires that occurred in Tulare County from 1910 to 2014, only 5% of fires were the result of equipment use.[11] Project construction-related activities will be required to comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Due to the short, temporary, and intermittent duration of the construction-related activity period, the Project's location in an area that is not a high-risk area for wildfire, and compliance with applicable existing codes and ordinances, Project construction-related activities will not significantly exacerbate wildfire risks during construction-related activity.

The proposed Project will involve the construction of both transmission and collector lines. Power generated by the proposed Project will be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line. Electrical lines can start a fire if an object such

[11] Ibid (n 5). Page 71.

as a tree limb, kite, or mylar balloon simultaneously contacts the power line conductors and a second object, such as the ground or a portion of the supporting pole. System component failures and accidents during maintenance activities can also cause line faults that result in arcing on power lines. The operation of the overhead interconnection line could result in an additional potential source of ignition. However, the majority of the line crosses over paved areas (including unpaved areas within existing roadway rights-of-way); therefore, the increase in risk will not be significant. Additionally, in order to limit fire risk, maintenance will include the management and removal of combustible vegetation around the Project site boundary. Project site perimeter roads will also function as fire breaks.

Project decommissioning will require the dismantling and removal of Project equipment and the restoration of the Project site. Increases in wildfire risks during decommissioning will be similar to Project construction-related activities. Project decommissioning will also be required to comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials.

Project construction, operation, and decommissioning will not significantly exacerbate wildfire risks and will not expose Project occupants or nearby residents to the risk of the uncontrollable spread of wildfire or pollutant concentrations resulting from a wildfire. As such, the Project will result in a ***Less than Significant Impact.***

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, Project construction, operation, and decommissioning will not significantly exacerbate wildfire risks and will not expose Project occupants or nearby residents to the risk of the uncontrollable spread of wildfire or pollutant concentrations resulting from a wildfire. Therefore, a ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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?

Project Impact Analysis: ***Less than Significant Impact***

The proposed Project includes the construction of a gen-tie line, an overhead and underground collection system, solar panel arrays, an O&M facility, an energy storage system, inverter station, a substation, and internal access/egress roads that could potentially exacerbate fire risk and result in temporary or ongoing impacts to the environment. From the proposed Project's substation(s),

power will be transmitted to SCE Vestal Substation via a 230 kV overhead and/or underground gen-tie line.

New internal roads will be constructed and maintained to serve as access/egress roads from the existing public road network to the solar array blocks. All road improvements will be completed per County code and regulations. These roads will be cleared and compacted for equipment and emergency vehicle travel and access to the solar blocks as required in coordination with the County Fire Department. These Project site access roads will remain in place for ongoing operations and maintenance activities after construction-related activity is completed.

The proposed Project will involve the construction of both transmission and collector lines. Power generated by the proposed Project will be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line. Electrical lines can start a fire if an object such as a tree limb, kite, or mylar balloon simultaneously contacts the power line conductors and a second object, such as the ground or a portion of the supporting pole. System component failures and accidents during maintenance activities can also cause line faults that result in arcing on power lines. The operation of the overhead interconnection line could result in an additional potential source of ignition. However, the majority of the line crosses over paved areas (including unpaved areas within existing roadway rights-of-way), therefore the increase in risk will be less than significant.

The proposed Project's battery storage will include multiple levels of protections against overcharge. The energy storage systems will be situated internally to the Project site, with access from a primary fire apparatus roadway and will be separated from each other per the setback requirements in the California Building Code, Section 608. The proposed energy storage facilities also include the following important monitoring and safety components: (1) Modular battery racks designed for ease of maintenance, (2) Integrated heat and fire detection and suppression system, (3) Integrated air conditioning system and, (4) Integrated battery management system. The heat and fire detection system will be linked to an automatic fire suppression system for each energy storage system. Critical information from the battery system, equipment data will be monitored by the battery monitoring system along with the solar plant performance with the supervisory control and data acquisition control system. The battery management system will track the performance, voltage and current, and state of charge of the batteries, proactively searching for changes in performance that could indicate impending battery cell failure, and power down and isolate those battery strings in order to avoid potential failures.

Based on these considerations, the installation and maintenance of Project infrastructure will not significantly exacerbate fire risk or result in temporary or ongoing impacts to the environment. As such, the Project will result in a ***Less than Significant Impact.***

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the installation and maintenance of Project infrastructure will not significantly exacerbate fire risk or result in temporary or ongoing impacts to the environment. A ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

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?

Project Impact Analysis: ***Less than Significant Impact***

Development of the proposed Project will alter existing onsite drainage patterns and flowpaths compared to existing conditions and include the introduction of new impervious surfaces. The Project will require implementation of a Stormwater Pollution Prevention Plan (SWPPP), which will include erosion and sediment control BMPs during construction, thereby reducing the potential of erosion and siltation during construction and will control potential flooding events that could occur during construction.

As mentioned above, Project construction, operation, and decommissioning will not significantly increase the risk of wildfire. Based on the generally flat topography and surface hydrology, there is a low potential for the Project site to be at risk of post-fire slope instability or drainage changes. Therefore, there is a ***Less than Significant Impact.***

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not expose people or structures to significant risks, post-fire slope instability, or drainage changes. A ***Less than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant Impact***

As noted earlier, Project-specific or cumulative impacts related to this resource will be ***Less than Significant***.

3.21 Mandatory Findings of Significance

3.21.1 Summary of Findings

None of the conditions stated below under Section 15065(a) (1)-(4) are present due to the impacts from the proposed Project. The impacts to the following resources are therefore ***Less Than Significant with Mitigation***.

3.21.2 Introduction

CEQA Requirements

CEQA Guidelines "Mandatory Findings of Significance" (Section 15065(a)) lists the following potential impacts that need to be addressed by a lead agency:

15065(a): *"A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:*

(1) The project has 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 an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

(2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

(3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

(4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."

Under the California Environmental Quality Act (CEQA), an EIR must be prepared when certain specified impacts may result from construction or implementation/operation of a project. An EIR has been prepared for the proposed Project, which fully addresses all of the Mandatory Findings of Significance, as described below.

Under Section 15065(a) of the CEQA Guidelines, a finding of significance is required if a project "has the potential to substantially degrade the quality of the environment." In practice, this is the same standard as a significant effect on the environment, which is defined in Section 15382 of the CEQA Guidelines as "a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts related to the following environmental factors:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfires

As summarized in the Project Requirements/Mitigation Measures Section, this EIR discusses potential environmental resource impacts, the level of significance prior to mitigation, project requirements that are otherwise required by law or are incorporated as part of the project description, feasible mitigation measures, and the level of significance after the incorporation of mitigation measures.

This section of the Draft Environmental Impact Report (DEIR) meets CEQA requirements by making Mandatory Findings of Significance relative to impacts of the proposed Project site located in the San Joaquin Valley portion of Tulare County. The Environmental Setting section summarizes environmental resources in the region with special emphasis on the proposed Project site and vicinity. The Regulatory Setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Long-Term Impacts

As described in Section 15065(a)(2) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. This document addresses the short-term and irretrievable commitment of natural resources to ensure that the consumption is justified on a long-term basis.

Cumulative Impacts

Section 15130(a) of the CEQA Guidelines provides that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in Section 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[1]

[1] CEQA Guidelines, Section 15130 (a).

Impacts to Species

Under Section 15065(a)(1) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

Section 3.4, Biological Resources, of this EIR (which is supported by a Biological Resources Assessment included in Appendix "D" of this document) fully addresses impacts related to Biological resources.

Impacts to Historical Resources

Section 15065(a)(1) of the CEQA Guidelines states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to eliminate important examples of a major period of California history or prehistory. Section 15065(a)(1) of the CEQA Guidelines amplifies Public Resources Code 21001(c) requiring that major periods of California history are preserved for future generations. It also reflects the provisions of Public Resource Code Section 21084.1 requiring a finding of significance for substantial adverse changes to historical resources.

Section, 3.5 Cultural Resources, and Section 3.18, Tribal Cultural Resources, of this EIR (which are supported by a Cultural Resources Assessment included in Appendix "E" of this document) fully addresses impacts related to California history and prehistory, historic resources, and archaeological resources. Section 3.7, Geology and Soils, of this EIR fully addresses impacts related to paleontological resources.

Impacts on Human Beings

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings will be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this EIR.

Thresholds of Significance

The geographical area may be countywide, statewide, or nationwide, depending on the nature of the impact. Thresholds of Significance for impacts to biological resources are addressed in detail in Section, 3.4 Biological Resources, of this EIR. Thresholds of Significance for impacts to cultural resources, including impacts to historic and prehistoric resources, are addressed in Section 3.5, Cultural Resources and Section 3.18, Tribal Cultural Resources, of this EIR.

3.21.3 Environmental Setting

"Tulare County… is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin valley floor, which is very fertile and extensively cultivated. Tulare County is the second-leading agricultural-producing county in the U.S. Fresno County is currently (2004) the top producer. In addition to its agricultural production, the county's economic base also includes agricultural packing and shipping operations."[2]

The Project site encompasses approximately 3,614 acres of land located near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. Neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route (SR) 65. The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures. The portion of the Project site located south of the White River is surrounded by the Tulare Solar Center facility.

Native Vegetation

The native vegetation of the Valley is predominately characterized by the purple needlegrass series, valley oak series, vernal pools and wetland communities, and blue oak series. Fauna associated with this section include mule deer (*Odocoileus hemionus*), black-tailed deer (*Odocoileus hemionus columbianus*), coyotes (*Canis latrans*), white-tailed jackrabbits (*Lepus townsendii*), kangaroo rats (*Dipodomys ingens*), kit fox (*Vulpes macrotis*), and muskrats (*Ondatra Zibethicus*). Birds include waterfowl, hawks, golden eagles (*Aquila chrysaetos*), owls, white-tailed kites (*Elanus leucurus*), herons, western meadowlark (*Sturnella neglecta*) and California quail (*Callipepla californica*).[3]

Two natural vegetation communities and six land cover types were documented within the Project site: 1) Fallow agricultural field; 2) Agricultural fields (grain/ruderal); 3) Developed; 4) Intermittent stream; 5) Ephemeral drainage; 6) Basin; 7) Isolated seasonal wetland; and 8) Irrigation ditch.

The majority of the Project site (93 percent) is comprised of active agricultural fields (containing crops or recently disked lands), fallow agricultural fields (fields in state of reversion back to non-native grassland), and developed areas (roads, agricultural infrastructure, and rural single-family houses).

Existing Cultural and Historic Resources

"Tulare County's known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources."[4]

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State

[2] Tulare County 2030 Update General Plan Background Report. Page 1-2.

[3] Ibid. Page 9-10.

[4] Ibid. Page 9-56.

University, Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws. As noted earlier, a Cultural Resources Assessment is included in Appendix "E" of this EIR.

3.21.4 Regulatory Setting

Federal

See Sections 3.4, 3.5, and 3.18 of this document for federal regulations related to biological, cultural, and tribal cultural resources; respectively.

State

See Sections 3.4, 3.5, and 3.18 of this document for state regulations related to biological, cultural, and tribal cultural resources; respectively.

Local

See Sections 3.4, 3.5, and 3.18 of this document for local regulations related to biological, cultural, and tribal cultural resources; respectively.

3.21.5 Impact Evaluation

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?

Findings: Impacts to Biological Resources

Project Impact Analysis: ***Less than Significant with Mitigation***

The "*Rexford Solar Farm Project Biological Resources Assessment*" was prepared by Rincon Consultants, Inc. (Rincon) and is included in Appendix "D" of this EIR.

3.4 a) ***Less than Significant with Mitigation***

Section 3.4, Biological Resources, discusses impacts on biological resources in greater detail. The proposed Project has the potential to impact the following special-status species: San Joaquin Adobe Sunburst, San Joaquin kit fox, burrowing owl, raptors, and vernal pool fairy shrimp. With implementation of **Mitigation Measures 3.4-1 through 3.4-6**, potential Project-specific impacts will be ***Less than Significant Impact with Mitigation.***

3.4 b) ***No Impact***

Four elderberry plants were observed during the reconnaissance-level site visit at the two locations where the White River crosses through the Project site. There is a potential that the proposed Project could impact elderberry plants during clearing and grubbing of the Project site. The proposed Project will be designed to avoid impacts to all mapped elderberry shrub through implementation of **Mitigation Measure 3.4-7**. With the implementation of **Mitigation Measure 3.4-7**, these impacts will be ***Less than Significant Impact with Mitigation***.

3.4 c) ***Less than Significant with Mitigation***

The White River, the ephemeral drainage, the irrigation ditch, and isolated seasonal wetlands are all considered waters of the state and fall under the jurisdiction of the RWQCB under the Porter-Cologne Act. The White River and the ephemeral drainages are also under CDFW jurisdiction pursuant to CFGC. Filling and/or direct removal of any jurisdictional wetland features will constitute a direct impact. Indirect impacts from development could occur if runoff were allowed to enter any water features on-site or adjacent to the Project site and will be considered a significant impact under CEQA. With the implementation of **Mitigation Measure 3.4-8**, these impacts will be ***Less than Significant Impact with Mitigation***.

3.4 d) ***Less than Significant***

The Project site provides limited opportunities for local wildlife movement and given the extent of development and agricultural practices within and surrounding the Project site, development of the Project is not expected to interfere with established resident or migratory wildlife corridors. Therefore, the Project will result in a ***Less than Significant Impact***.

3.4 e) ***No Impact***

The proposed Project will not conflict with any policies or ordinances protecting biological resources. Therefore, ***No Impact*** related to this Checklist Item will occur.

3.4 f) ***No Impact***

The Project site is not included in any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plans. ***No Impact*** will occur.

Cumulative Impact Analysis: ***Less than Significant with Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley, the State of California, and the Western United States. As noted in Section 3.4, Biological Resources, of this EIR, cumulative impacts related to biological resources will be ***Less Than Significant*** with implementation of **Mitigation Measures 3.4-1 through 3.4-8.**

Mitigation Measure(s): **Mitigation Measures 3.4-1 through 3.4-8**

Conclusion: ***Less than Significant with Mitigation***

Potential Project-specific and cumulative impacts to biological resources will be ***Less Than Significant*** with implementation of **Mitigation Measures 3.4-1 through 3.4-8.**

Findings: Impacts to Examples of the Major Periods of California History or Prehistory

Project Impact Analysis: ***Less than Significant with Mitigation***

Section 3.5, Cultural Resources, discusses impacts to historic or prehistoric resources in greater detail. Mitigation measures have been included to address the potential of cultural resources being unearthed as a result of proposed Project-related ground excavation. **Mitigation Measures 3.5-1 and 3.5-2** are included in the unlikely event that archaeological resources are unearthed during Project-related ground excavation; and Section 3.5, Cultural Resources, includes compliance with Section 7050.5 of the California Health and Safety Code (and CEQA Guidelines Section 15064.5) and CEQA Guidelines Section 15064.5 if human remains are discovered during Project construction.

Cumulative Impact Analysis: ***Less than Significant with Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measures 3.5-1 and 3.5-2**, potential Project-specific impacts will be reduced to a less than significant level. Therefore, the Project's cumulative impacts will also be ***Less than Significant Impact with Mitigation***.

Mitigation Measure(s): **Mitigation Measures 3.5-1 and 3.5-2**

Conclusion: ***Less than Significant with Mitigation***

With implementation of **Mitigation Measures 3.5-1 and 3.5-2**, potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less than Significant Impact with Mitigation***.

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)?

Project Impact Analysis: ***See Sections 3.1 through Section 3.20 of this EIR***

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Section 4 of this EIR.

Cumulative Impact Analysis: ***See Section 4 of this EIR***

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Section 4 of this EIR.

Mitigation Measure(s): ***See Section 4 of this EIR***

Conclusion: ***See Section 4 of this EIR***

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Section 4 of this EIR.

c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Project Impact Analysis: ***Less than Significant***

The proposed Project will not result in any impacts to human beings beyond what has already been analyzed in Sections 3.1 through 3.20 of this EIR.

There are no significant environmental adverse effects from the Project to human beings.

Cumulative Impact Analysis: ***Less than Significant***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

There are no significant environmental adverse effects from this Project to human beings.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less than Significant***

There will be ***Less Than Significant*** environmental effects which will cause substantial adverse effects to impacts to human beings either directly or indirectly.

4 Summary of Cumulative Impacts

4.1 Cumulative Impacts Analysis Under CEQA

Section 15355 Cumulative Impacts

"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

a) The individual effects may be changes resulting from a single project or a number of separate projects.

b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."[1]

Section 15130 Discussion of Cumulative Impacts

a) "An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

   (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

   (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.

   (3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the

[1] CEQA Guidelines Section 15355.

identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:

(1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

(2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.

(3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and

(5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.

e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section15183(j)."[2]

Tulare County is the geographic extent for most impact analysis. This geographic area is the appropriate extent because of the following reasons:

1. The proposed Project is in Tulare County and the County of Tulare is the Lead Agency; and
2. Tulare County General Plan polices apply to the proposed Project.

The basis for other resource specific cumulative impact analysis includes:

- For Air Quality and Greenhouse Gas Emissions it is the San Joaquin Valley Air Basin;
- For Biological Resources it is the San Joaquin Valley;
- For Cultural Resources it is Tulare County; and
- For Hydrology it is the Tulare Lake Basin.

Past, Present, Probably Future Projects

Tulare County Association of Governments (TCAG) Blueprint Scenario

Under the Tulare County Regional Blueprint Preferred Growth Scenario, TCAG suggested a 25% increase over the status quo scenario to overall density by 2050. The preferred growth scenario principles included directing growth towards incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are/or will be provided. Another relevant preferred scenario is the creation of urban separators around cities. The proposed Project location is outside incorporated areas and would be consistent with the goal of separating urban boundaries.[3]

Tulare County 2030 General Plan

The Cumulative Analysis outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR notes regional population growth (which in part was developed by TCAG) and a number of major projects. Regional population projections are provided in **Table 4-1**.[4]

[2] CEQA Guidelines, Section 15130.

[3] Tulare County Associated of Governments Blueprint 2050, Preferred Scenario (2009).

[4] Tulare County General Plan 2030 Update Recirculated Draft EIR. Pages 5-4 to 5-5.

Table 4-1. Regional Population Projections and Planning Efforts

Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
City of Dinuba	2006-2026	33,750	Farmland conversion; conflicts with agricultural zoning and Williamson Act contracts; conversion of agricultural soils to non-agricultural use; regional air quality impacts; and climate change-greenhouse gases.
City Woodlake			Unavailable
City of Visalia	1991-2020	165,000	Air quality; biological resources; land use conflicts; noise; transportation/traffic; mass transit; agricultural resources; water supply; and visual resources.
City of Tulare	2007-2030	134,910	Farmland conversion; aesthetics; water supply; traffic; air quality; global climate change; noise; flooding from levee or dam failure; biological resources; and cultural resources.
City of Farmersville	2002-2025	12,160	Agricultural resources; agricultural land use conflicts; air quality; and traffic circulation.
City of Exeter			Information unavailable at time of analysis
City of Lindsay	1990-2010	17,500	Air quality and farmland land conversion.
City of Porterville	2006-2030	107,300	Farmland conversion; air quality; noise; and biological resources.
City of Kingsburg	1992-2012	16,740	Farmland conversion and air quality
City of Delano	2005-2020	62,850	Air quality; noise; farmland conversion; disruption of agricultural production; and conversion of agricultural soils to non-agricultural use.
County of Fresno	2000-2020	1,113,790	Farmland conversion; reduction in agricultural production; cancellation of Williamson Act Contracts; traffic; transit; bicycle facilities; wastewater treatment facilities; storm drainage facilities; flooding; police protection; fire protection; emergency response services; park and recreation facilities; library services; public services; unidentified cultural resources; water supply; groundwater; water quality; biological resources; mineral resources; air quality; hazardous materials; noise; and visual quality.
County of Kern	2004-2020	1,142,000	Air quality; biological resources; noise; farmland conversion; and traffic.
County of Kings	1992-2005	149,100 (low) 228,000 (high)	Biological resources; wildlife movement; and special status species

*The adopted Kings County General Plan did not identify a projected population for 2005. The General Plan does include population projections for 2010, which is included in this table.

SOURCE: City of Delano, 1999; City of Dinuba, 2008; City of Farmersville, 2003; City of Kingsburg, 1992; City of Lindsay, 1989; City of Porterville, 2007; City of Visalia, 2001, 1991; County of Fresno, 2000; County of Kern, 2004; County of Kings, 2009; DOF, 2007; TCAG, 2008.

In addition to the Regional Growth Projections used for the cumulative impact analysis, the Tulare County General Plan Update 2030 Recirculated Draft EIR noted the following Major Projects:

Rancho Sierra: Status – GPA approved. The project site consists of 114.6 acres. The site was a golf course facility located on both sides of Liberty Avenue (Avenue 264), east of Road 124, south of the city of Visalia. There are 30 existing homes within the golf course area but not a part of this application. The intended use is to subdivide the site into 175 single family residential lots.

Goshen: Status – Approved. On June 5, 2018, the Tulare County Board of Supervisors (BOS) approved the Goshen Community Plan. The Goshen Community Plan Update was updated to implement the 2030 Tulare County General Plan (2012). The project Study Area Boundary assessed the potential project impacts from the proposed land use changes, for the areas generally north of Riggin Drive and south of Avenue 320, Road 60 to the east, Avenue 304 to the south (including areas between SR 99 and railroad tracks north of the northbound connector from SR 198), and to the City of Visalia's sphere of influence to the east. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Goshen Community Plan Update is consistent with the General Plan 2030 Update, and includes the following primary goals and objectives: (1) Land use and environmental planning - Promote development within planning areas next to the Regional State Route 99 Corridor; (2) Improvements for a "disadvantaged community"; and 3) Strengthening the relationship between the RMA the Tulare County Association of Governments (TCAG) which will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects. By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network. Some of the major components of the Community Plan Update are based on Caltrans reconstructing the over-crossing at Betty Drive and State Route 99 in the Community of Goshen. There are five additional projects that have been analyzed; three directly and two in relationship to the project's impacts to these areas. The County is proposing more than 20 new land use and zoning designations, including a Mixed Use zone. Also in the process is an update to the Zoning Code to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan. The Goshen Community Plan is consistent with Tulare County General Plan 2030 Update.

Earlimart Community Plan: Status – GPA approved. On January 28, 2018, the Tulare County Board of Supervisors (BOS) approved the Earlimart Community Plan Update (General Plan Amendment No. 14-005) to implement the Tulare County General Plan 2030 Update (2012). Among the entitlements that were updated are: (1) the General Plan Amendment, (2) changes to Zoning District Boundaries, and (3) changes to the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Earlimart Community Plan Update. Consistent with the General Plan and the Community Plan Update Study Area Boundary, the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary (UDB) and their potential impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors on December 15, 2015, for inclusion in the Circulation Element of this Community Plan Update. The Earlimart Complete Streets Program thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The three (3) projects that were analyzed at the project level in this DEIR include: (1) the New High School Project, (2) the Northern Earlimart Rezone Project, and (3) the Existing UDB Project. The County adopted six (6) land use and zoning districts, including a Mixed Use zone. Also updated was the Zoning Code to include a mixed use zoning district in compliance with the

mixed use designation in the 2030 General Plan. The Community Plan Update is intended to serve residents and business owners in the project area by providing necessary public improvements, encouraging rehabilitation and repair of deteriorating infrastructure and fostering economic development of the project area. The Earlimart Community Plan is consistent with Tulare County General Plan 2030 Update.

Traver Community Plan: Status – GPA approved. On December 16, 2014 the Tulare County Board of Supervisors (BOS) approved an update to the Traver Community Plan. The project site/amendment area covers approximately 268 acres in area and encompasses the existing Traver Community Urban Development Boundary (UDB). No change occurred to the UDB. The Traver Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and includes the following primary goals and objectives. i) a General Plan Amendment No. GPA 14-003 to Update the Traver Community Plan, including the Traver Complete Streets Report; ii) Adopted Section 18.9, the Zoning Ordinance, and established a Mixed-Use Combining Zone; iii) Applied the Mixed-Use Overlay Zone to select properties located within the UDB of Traver and approved the rezoning plan for the Community of Traver (PZ 14-002); and iii) Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Traver Urban Development Boundary Area. The Traver Community Plan is consistent with Tulare County General Plan 2030 Update.

Ducor Community Plan: Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Ducor Community Plan. The project is a comprehensive update of the Ducor Community Plan for the unincorporated community of Ducor located in south-central Tulare County. The Ducor Urban Development Boundary (UDB) adopted in the 2004 Terra Bella/Ducor Community Plan, which established a Community boundary of 366 acres. The project did not propose any changes to the existing Ducor UDB and, as such, the existing UDB and the proposed project area remain at 366 acres. The objective in preparing the Plan Update was to develop a plan which can accurately reflect the needs and priorities of Ducor. The Plan Update includes assumptions regarding the amount and location of growth and development anticipated to occur in the community through the horizon Year 2030. The Ducor Community Plan is consistent with Tulare County General Plan 2030 Update.

Terra Bella Community Plan: Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Terra Bella Community Plan. Terra Bella is located in south-central Tulare County. The Terra Bella Urban Development Boundary (UDB) was adopted in the 2004 Terra Bella/Ducor Community Plan and contains 1,393 acres. The Terra Bella Community Plan Update (Plan Update or project) did not propose any changes to the existing Terra Bella UDB and, as such, the existing UDB area remained at approximately 1,393 acres. The objective in preparing the Plan Update was to develop a plan which can accurately reflect the needs and priorities of Terra Bella. The Plan Update includes assumptions regarding the amount and location of growth and development anticipated to occur in the community through the horizon Year 2030. The Terra Bella Community Plan UDB has an adequate amount of land designated for development to accommodate growth through horizon Year 2030. The Terra Bella Community Plan is consistent with Tulare County General Plan 2030 Update.

Pixley Community Plan: Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Pixley Community Plan. Pixley is a rural unincorporated community located in the southwest portion of Tulare County between the communities of Tipton and Earlimart, adjacent to State Route 99. The Pixley Urban Development Boundary (UDB), which includes the North Pixley Specific Plan area, consists of approximately 1,992 acres. Overall, the BOS approved the Pixley Community Plan General Plan Update - GPA 14-002, Pixley Zone code Redistricting/Mixed

Use Overlay - PZ 15-010, and Pixley By-Right Zoning - PZ 15-011, to allow consistency with the Tulare County General Plan 2030 Update. As such, the Pixley Community Plan is consistent with Tulare County General Plan 2030 Update and includes the following primary goals and objectives. The objective in preparing the Plan Update was to develop a plan which can accurately reflect the needs and priorities of Terra Bella. The Plan Update includes assumptions regarding the amount and location of growth and development anticipated to occur in the community through the horizon Year 2030. The Pixley Community Plan UDB has an adequate amount of land designated for development to accommodate growth through horizon Year 2030.

Tipton Community Plan: Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved the Tipton Community Plan. Tipton is located in the San Joaquin Valley portion of Tulare County, it is approximately eight miles south of Tulare. Tipton is located at the intersection of SR 99 (a major north and south transportation corridor) and State Route 190/Avenue 144 (west of SR 99 (an east and west transportation corridor). Overall, the objective of the Tipton Community Plan is to accurately reflect the needs and priorities of the unincorporated community of Tipton. As such, the Tipton Community Plan is consistent with Tulare County General Plan 2030 Update, and includes the following primary goals and objectives. 1) Land Use and Environmental Planning (to promote development within planning areas next to the Regional Highway 99 Corridor in order to implement applicable General Plan goals); 2) Improvements for a “disadvantaged community” (i.e., increase employment opportunities, increase competitiveness in receiving housing grant awards, and enhance opportunities to receive infrastructure grant awards); 3) Strengthening Relationship with TCAG – (which would help to facilitate the funding and implementation of key transportation programs, such as Complete Streets, and major state Transportation Improvement Program (STIP) projects); and 4) a Zone Ordinance Amendment adopting a Mixed-Use Overlay Zone; Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Tipton Urban Development Boundary Area; and adoption of a Complete Streets Policy for the unincorporated community of Tipton. Tipton’s Urban Development Boundary contains approximately 1,008 acres.

Strathmore Community Plan: Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Strathmore Community Plan. The Strathmore Community Plan is consistent with the approved Tulare County General Plan 2030 Update, and includes the following primary goals and objectives. 1) Land Use and Environmental Planning (to promote development within planning areas next to the SR 65 99 Corridor in order to implement applicable General Plan goals); 2) Improvements for a “disadvantaged community” (i.e., increase employment opportunities, increase competitiveness in receiving housing grant awards, and enhance opportunities to receive infrastructure grant awards); 3) Strengthening Relationship with TCAG – (which would help to facilitate the funding and implementation of key transportation programs, such as Complete Streets, and major state Transportation Improvement Program (STIP) projects); and 4) a Zone Ordinance Amendment adopting a Mixed-Use Overlay Zone; Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Strathmore Urban Development Boundary Area; and adoption of a Complete Streets Policy for the unincorporated community of Strathmore.

Three Rivers Community Plan: Status – GPA approved. On June 26, 2018, the Tulare County Board of Supervisors (BOS) approved the Three Rivers Community Plan. The Three Rivers Community Plan Update was updated to implement the 2030 Tulare County General Plan (2012). The unincorporated community of Three Rivers is located within an Urban Development Boundary (UDB) consisting of approximately 21,000 acres and is located approximately 30 miles northeast of Visalia. The nearest incorporated city is Woodlake, approximately 16 miles west on State Route 216. The Three Rivers Community Plan Update is consistent with the General Plan 2030 Update, and includes the following

primary goals and objectives: (1) Land use and environmental planning; 2) Economic Development; 3) Three Rivers Community Plan Vision Statements (wherein the Community Plan will provide appropriate direction to help guide balanced public and private decisions affecting the community including provisions for the overall direction, density, type of growth, and protection of the natural environment that is consistent with the Tulare County General Plan, and the needs and desires of the Three Rivers Community to maintain its rural character); and 4) Strengthening Relationship with TCAG – (which would help to facilitate the funding and implementation of key transportation programs, such as Complete Streets, and major state Transportation Improvement Program (STIP) projects). The Board also approved an update to the Zoning Code (and Zone Map) to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan.

Poplar-Cotton Center: Status – GPA approved. GPA approved. On December 4, 2018, the Tulare County Board of Supervisors (BOS) approved the Poplar/Cotton Center Community Plan update. The project site is located approximately eight miles west of Porterville and eleven miles southwest of Lindsay. It is generally bound by Avenue 136 on the south, Avenue 152 on the north, Road 184 on the west, and Road 193 on the east; and encompasses approximately 1.3 square miles of land. The objective of the Poplar/Cotton Center Community Plan Update is to develop a community plan which can accurately reflect the needs and priorities of this unincorporated community. The Land Use and Circulation portions of this Plan will provide the mechanism to minimize or avoid the potential adverse impacts of urban growth. The development of an orderly, harmonious land use pattern and appropriate implementation measures are designed to reduce potential conflict between neighboring uses across Tulare County's 2030 planning horizon, consistent with the Tulare County 2030 General Plan Update. The Community Plan for General Plan Amendment No. GPA 17-010, which is inclusive of the Poplar/Cotton Center Community Plan, amendments to Section 18.9 (PZC 18-006), Section 16 (PZC 18-007), and the Zoning District Map (PZC 18-012), Section 16 (PZC 18-013), and the Zoning District Map (PZC 18-014) of Ordinance No. 352, the Zoning Ordinance, for the Community of Poplar/Cotton Center. The General Plan Amendment is required to i) update the existing Community Plan for Poplar/Cotton Center; ii) approve a Zoning Ordinance amendment to add Poplar/Cotton Center to the Mixed Use Overlay zoning district Section 18.9; iii) approve an amendment to Section 16 of the Zoning Code to allow additional by-right uses; and iv) approve the Zoning District Map, within the Poplar/Cotton Center Urban Development Boundary, under CEQA Sections 1507 through 1573 of the CEQA Guidelines.

Ivanhoe Community Plan: Status – GPA approved. On July 9, 2019, the Tulare County Board of Supervisors (BOS) approved the Ivanhoe Community Plan update. The Ivanhoe Community Plan Update is intended to implement the 2030 Tulare County General Plan (2012). Ivanhoe is bounded by Avenue 320 in the south, Avenue 336 in the north, Road 152 in the west, and Road 164 in the east and encompasses two square miles of land. SR 216 traverses the southeastern portion of the Community and provides access to SR 198 in Visalia (approximately ten miles southwest of Ivanhoe). SR 99 is located approximately 13 miles west of Ivanhoe. The objective of the Ivanhoe Community Plan Update is to develop a community plan which can accurately reflect the needs and priorities of the unincorporated community of Ivanhoe. The Plan is needed to increase the availability of infrastructure funding, such as drinking water system improvements (wells, water distribution piping, storage tanks, etc.), wastewater system improvements (such as treatment, piping, lift stations, etc.), and public works/safety improvements (such as curbs, gutters, sidewalks, etc.), and to stimulate economic development within the community. The Community Plan for General Plan Amendment No. GPA 17-006, which is inclusive of the Ivanhoe Community Plan, amendments to Section 18.9 (PZC 18-006), Section 16 (PZC 18-007), and the Zoning District Map (PZC 18-008) of Ordinance No. 352, the Zoning Ordinance for the Community of Ivanhoe, were required to achieve consistency with the

Tulare County General Plan 2030 Update (August 2012). The General Plan Amendment is required to i) update the existing Community Plan for Ivanhoe; ii) approve a Zoning Ordinance amendment to add Ivanhoe to the Mixed Use Overlay zoning district Section 18.9; iii) approve an amendment to Section 16 of the Zoning Code to allow additional by-right uses; and iv) approve the Zoning District Map, within the Ivanhoe Urban Development Boundary, under CEQA Sections 1507 through 1573 of the CEQA Guidelines.

Plainview Community Plan: Status – GPA approved. On July 9, 2019, the Tulare County Board of Supervisors (BOS) approved the Plainview Community Plan update. The Plainview Community Plan Update is intended to implement the 2030 Tulare County General Plan (2012). Plainview is located approximately four miles west of Strathmore and approximately six (6) miles southwest of Lindsay. The Plainview community boundary includes Avenue 196 on the north; Road 198 on the east; Avenue 194 on the south; it includes both sides of Road 196 on the north; Road 196 to the intersection of Avenue 192; and it includes areas near the Road 195 alignment to the west side of Plainview. The objective of the Plainview Community Plan is to develop a community plan which can accurately reflect the needs and priorities of the unincorporated community of Plainview. The Plan is needed to increase the availability of infrastructure funding, such as drinking water system improvements (wells, water distribution piping, storage tanks, etc.), wastewater system (such as piping, lift stations, etc.), and public work/safety improvements (such as curbs, gutters, sidewalks, etc.), and to stimulate economic development within the community. The Community Plan for General Plan Amendment No. GPA 17-009, which is inclusive of the Plainview Community Plan, amendments to Section 18.9 (PZC 19-007), Section 16 (PZC 19-008), and the Zoning District Map (PZC 19-009) of Ordinance No. 352, the Zoning Ordinance for the Community of Plainview, were required to achieve consistency with the Tulare County General Plan 2030 Update (August 2012). The General Plan Amendment is required i) for the Community Plan for Plainview; ii) to approve a Zoning Ordinance amendment to add Plainview to the Mixed Use Overlay zoning district Section 18.9; iii) to approve an amendment to Section 16 of the Zoning Code to allow additional by-right uses; and iv) to approve the Zoning District Map, within the Plainview Urban Development Boundary, under CEQA Sections 1507 through 1573 of the CEQA Guidelines.

Woodville Community Plan: Status – GPA approved. On July 9, 2019, the Tulare County Board of Supervisors (BOS) approved the Woodville Community Plan update. The Woodville Community Plan Update is intended to implement the 2030 Tulare County General Plan (2012). Woodville is located southeast of the Road 152/Avenue 168 intersection and is located approximately ten (10) miles southeast of the City of Tulare and eight (8) miles northeast of the State Route 99/Highway 190 interchange. The objective of the Woodville Community Plan is to develop a community plan which can accurately reflect the needs and priorities of the unincorporated community of Woodville. The Plan is needed to increase the availability of infrastructure funding, such as drinking water system improvements (wells, water distribution piping, storage tanks, etc.), wastewater system (such as piping, lift stations, etc.), and public works/safety improvements (such as curbs, gutters, sidewalks, etc.), and to stimulate economic development within the community. The Community Plan for General Plan Amendment No. GPA 17-013, which is inclusive of the Woodville Community Plan, amendments to Section 18.9 (PZC19-004), Section 16 (PZC 19-005), and the Zoning District Map (PZC 19-006) of Ordinance No. 352, the Zoning Ordinance for the Community of Woodville, is required to achieve consistency with the Tulare County General Plan 2030 Update (August 2012). The General Plan Amendment is required i) for the Community Plan for Woodville; ii) to approve a Zoning Ordinance amendment to add Woodville to the Mixed Use Overlay zoning district Section 18.9; iii) to approve an amendment to Section 16 of the Zoning Code to allow additional by-right uses; and iv) to approve the

Zoning District Map, within the Woodville Urban Development Boundary, under CEQA Sections 1507 through 1573 of the CEQA Guidelines.

In addition to the Major Projects summarized above, the approved projects listed as follows may contribute to cumulative impacts:

Pena's: Status – Approved. The project is for Peña's Material Recovery Facility (MRF) and Transfer Station (TS)' which currently sits on 18.01 acres that are being rezoned from AE 30 to M1 Light Industrial Zoning, and rezoning 6.7 acres and 11.3 acres from residential and industrial reserve zoning to industrial zoning. The land is currently operated by Peña's Disposal, Inc. and has a previously permitted peak processing capacity of 500 tons per day (TPD). This existing facility serves the unincorporated northern portions of Tulare County and the unincorporated southern portions of Fresno County, and the City of Orange Cove in Fresno County. Within the County of Tulare, the facility serves the cities of Dinuba and Porterville, the communities of Cutler, Orosi, London, Sultana, Traver, Seville and other smaller communities in the area that may need to utilize the facility for the recycling of source-separated recyclables, commingled recyclables, commercial and industrial rubbish, green material and wood wastes, construction and demolition wastes, and inert debris to assist in reaching the diversion goals of the California Integrated Waste Management Act of 1989 (AB 939).

South County Correctional Detention Facility in Porterville: Status – Approved. The project will require a rezoning of the project site, which is half in the County and half in the City of Porterville. The proposed project contains a build-out "footprint" for the proposed facility of approximately 15.0 acres with a new maximum security Type II facility as the primary structure. The project will consist of 250-cell double occupancy units (500 beds) and 14 special use beds for a total of 514 beds. In addition to the main detention facility, the project will also include support service components.

As the site is currently under agricultural production, the project will require new utilities infrastructure (such as electrical, gas, phone, etc.). It will also require streets/roads improvements, potable water systems, wastewater systems, and storm water drainage infrastructure. These will be constructed or expanded to meet facility demands. Where feasible, the project will be extended to connect with existing potable water, wastewater, and storm water drainage infrastructure provided by City of Porterville. However, possible new construction of the above mentioned infrastructure may be necessary, and as such, will be evaluated.

Pixley Biogas: Status – Approved. The project is for development of a biogas facility on 2.75 acre portion of an 8 acre parcel. The digester will extract methane gas, via an anaerobic manure digester. The facility will be used to produce 266 MMBTUS per day of biogas via an anaerobic digestion of manure feedstock from nearby dairies. The biogas produced will be used to fuel the Calgren bio-refinery facility, located adjacent and to the south of the project site, which will reduce the Calgren plant consumption of natural gas.

Harvest Power: Status – Approved. The project is for a Composting Expansion and Anaerobic Digester. The project will allow a maximum total tonnage for the composting to increase from 156,000 tons per year to a potential 216,000 tons per year. An additional 60,000 tons will be allowed at the proposed anaerobic digester facility. The facility will produce transportation fuel through a compressed natural gas (CNG) refueling station.

Orosi Rock: Status – Approved. The project includes concrete a recycling and surface mining operation on 35.13 acres where concrete from various construction projects around the region are delivered for recycling. The project includes transporting up to 800,000 tons of aggregate via 44,000 trips per year heavy-duty truck trips from the operation on an annual basis.

The amendment to the previous permit allows an increase of 1.9 million tons of rock and 2.1 million tons of imported recycled concrete. The total production of aggregate will be 10.8 million tons over the course of the existing 25 year period of the existing permit. Excavating will be limited to 400' Mean Sea Level (MSL) and the operation will continue blasting by a licensed blaster to break up larger rocks that cannot be moved or broken up by mechanical equipment.

Tulare Solar Center: Status – Approved. The project includes the construction of an 80 MW solar photovoltaic facility on up to 800 acres of an approximately 1,144 acre property historically used as agricultural farmland in Tulare County, California. Proposed project construction generally requires a focus in three major areas. The areas of focus include: (1) The solar field with associated equipment, including solar PV panels/modules, racking systems, inverters, intermediate voltage transformers, access roads, and underground, above-ground, or overhead electrical systems to collect and consolidate power from across the project; (2) A substation(s) that receives the solar field's electrical production and increases the voltage to match the voltage of the adjacent utility grid via a generator step-up transformer(s), with project owned gen-tie lines, and (3) Any other electrical interconnection components necessary for the project's production to reach the utility grid, including disconnect equipment, communications lines (e.g., fiber optics) and a sub-transmission tap line.

Deer Creek Mine (PMR 14-002): Status – Approved. This project amended a Surface Mining Permit and Reclamation Plan to allow expanded operations at this site. The Applicant currently operates a rock and gravel surface mining operation on 98 of this 118 acre site. The site is located south of Deer Creek Drive, approximately 1/3 mile east of Avenue 120 and Road 272, approximately 4 miles southeast of Porterville. The project will result in no increase in the maximum depth of the mine, as expansion will occur laterally within the existing mining footprint. The approval includes an increase in production by 450,000 tons per year (from a maximum of 500,000 tons per year to a maximum of 950,000 tons per year). Increase truck hauling by 176 round trips per day (from a maximum of 200 round trips per day to a maximum of 376 round trips per day). The project will not result in any change to the estimated total rock production of 15,000,000 tons of rock material during the estimated 50 years of operation nor will it result in any change to the approved reclamation plan.

CMI (formerly Papich): Status – Approved. The Applicant received a Special Use Permit through Tulare County for the following: 1) Permanent establishment of the asphalt batch plant on the existing site; 2) Expansion of the existing operation from 3,700 tons/day to 8,000 tons/day of asphalt; and 3) To conduct retail/commercial sales of asphalt.

Derrel's Mini Storage: Status – Approved. The project includes a proposed General Plan Amendment (No. GPA 14-007) and proposed Change of Zone (No. PZ 14-001). GPA 14-007 received approval to amend the Tulare County Land Use Element of the General Plan by changing the land use designation on the 19.33-acre parcel from "Agriculture" to "Commercial or Light Industrial." PZ 14-001 was approved to re-zone the AE-20 (Exclusive Agricultural-20 acre minimum) Zone to C-3 (Service Commercial) Zone on the same 19.33 acres. The zone change allows, as noted in the Tulare County Zoning Ordinance, Mini-Warehouses – "Storage or warehousing service within a building or buildings primarily for individuals to store personal effects"[5]

The site consists of the phased construction of 19.33 acre mini- storage facility. Phase 1 consists of 129,550 square feet; Phase 2 consists of 148,950 square feet, and Phase 3 consists of 96,600 square feet. RV storage will be used on the Phase 2 portion of the site, moving to Phase 3 as the earlier phases are constructed with the eventuality of the entire site constructed as mini storage units (if

[5] Tulare County Zoning Ordinance. Page 13.

necessary) to meet market demands. It is possible that Phase 3 will remain as RV storage. The applicant approximates a ten year full build-out of the entire proposed project site.

Hash Farms Residential Subdivision: Status – Approved. The project will be located at the northwest corner of Road 16 and Avenue 396, partially within the City of Kingsburg, Fresno County, and Tulare County. The Hash Farms Development Specific Plan is an approved plan for development of a 200-unit residential subdivision (160 single-family units and 40 multi-family units) on a total of 54 acres, including a 2.54 acre park and 1.15 acre fenced stormwater basin. The site is approximately one-half mile east of State Route 99 and approximately one-tenth of a mile south of State Route 201. The 54-acre site is located on Tulare County APNs 028-140-007, 012, 013, 018 and 022, and Fresno County APNs 396-020-008 and 014. The County of Tulare Board of Supervisors approved a tentative subdivision map and a Specific Plan for this project. The City of Kingsburg, County of Fresno, Fresno County Local Agency Formation Commission, and Selma- Kingsburg-Fowler County Sanitation District will also need to take each agencies' respective actions.

Antelope Valley (Redfield): Status – Approved. The 43-unit single-family residential Antelope Valley Subdivision is located on a ±125-acre site (with average lot size of 2.14 acres) on the north side of Avenue 360 (west side of Road 220), approximately one mile north of the City of Woodlake in Tulare County. The site is approximately five miles west of State Route 198 and twenty-two miles east of State Route 99. The site is zoned PD-F-M (Planned Development-Foothill Combining-Special Mobile Home) Zone and is within the Woodlake 7.5 Minute USGS Quadrangle.

Sequoia Gateway Commerce Park: Status – Approved. The project consists of a Specific Plan/Corridor Plan for the development of a highway commercial/regional commercial center on ±126.9 acres at the southeast quadrant of State Route 99 and Avenue 280 (Caldwell Avenue) in an unincorporated area of Tulare County. The project will be developed in two major phases. Phase 1 consists of 22,950 sf of highway commercial uses such as fast-food outlets, retail, and gas station fueling pumps with associated convenience store, along with a 60,000 sf medical clinic building on approximately 12.4 acres in the northwest corner of the project site. Phase 2, will consist of 986,000 sf of mixed-use commercial land uses including regional retail, hotel, office, restaurant, and fast-food uses on approximately 101.6 acres. Phase 2 will be developed in at least four incremental sub-phases, including additional highway commercial uses adjacent to Phase 1, hotel and restaurant uses, office uses, and regional retail uses. The remaining 12.9 acres will be used for a planned stormwater basin and wastewater treatment plant, along with roadway rights-of-way. Project development will occur in accordance with the detailed planning and design guidelines and standards set forth in the "Sequoia Gateway Commerce Park Specific Plan" (which is contained in Appendix "A" of the EIR). Phase 1 will commence development in the near-term upon approval of entitlements and permits for that initial phase of development. Phase 2 will commence development at such future time as traffic capacity permits, or after the planned reconstruction of the State Route 99/Caldwell Avenue Interchange, currently in the planning stages, is completed, and other pre-requisite criteria are met for moving forward with permitting and entitlements for that latter phase of development.

Derrel's Mini Storage: Status – Approved. The re-designation of the land use and zone district for the ±15.0-acre parcel allows by-right construction of a mini-storage facility in two phases: Phase 1 – 148,500 sq. ft.; and Phase II – 175,200 sq. ft. At complete buildout, the total square footage of rentable storage space will be 323,700. The project also includes a 1,327 sq. ft. residence, a 391 sq. ft. garage, and an 804 sq. ft. office. The Board of Supervisors also approved General Plan Amendment No. GPA 17-031 and Zone Change No. PZC 18-015; (2) General Plan Amendment No. GPA 17-031 that changed the land use from "Mooney Corridor" to "Mixed Use" on one ±15.0 acre parcel; (3) Change of Zone No. PZC 18-015 that changed the zone district from AE-20 to C-2 on one ±15.0-acre parcel;

(4) Categorical Exemption and General Plan Amendment No. GPA 17-036 that changed the land use designation from “Mooney Corridor” to “Mixed Use” on two 1.0-acre parcels; and (5) Categorical Exemption and Change of Zone No. PZC 17-043 that changed the zone district from AE-20 to C-2 on two 1.0-acre parcels, located on the east side of Mooney Blvd., approximately 660 feet south of Avenue 264, north of Tulare.

Deer Creek Mine (PMR 19-001): Status – On-Going. The applicant currently operates a rock and gravel surface mining operation on 110 acres, as permitted by PMR 01-001, PMR 09-002, and PSP 01-055 (ZA), and PMR 14-002. Subsequently, the Applicant submitted an application (PMR 19-001) proposing an approximately 20-acre expansion to the footprint and increased operations of the existing and currently operational Deer Creek Mine facility. The permit amendments requested by PMR 19-001 will allow consistency between PMR 01-001, PMR 09-002, PSP 01-055(ZA), and PMR 14-002; result in an approximately 20-acre expansion through the use of a lot line adjustment toward the east and southeast on land currently used for grazing; increase annual production by 500,000 tons per year (from a maximum of 1,000,000 tons per year to a maximum of 1,500,000 tons per year); increase truck hauling by 224 round-trips per day (from a maximum of 376 roundtrips per day to a maximum of 600 round-trips per day), with a maximum of 60,000 truck trips per year; result in an increase in the maximum depth of the mine to 300 MSL; and result in a change to the estimated total rock production of 40,000,000 tons of rock to 75,000,000 tons of rock material during the estimated 50 years of operation.

Dunn Asphalt and Concrete Batch Plant: Status – Approved. The concrete batch plant is expected to produce 100,000 cubic yards of concrete per year. Aggregate, cement, and fly ash will be delivered to the site and ready-mix concrete will be delivered from the site. The concrete and asphalt recycling operation will consist of accepting broken concrete and asphalt from contractors. The concrete and asphalt will be crushed into recycled base; it is anticipated that 30,000 tons of recycled base will be produced per year and delivered from the site. The hot-mix asphalt (HMA) batch plant is expected to produce 125,000 tons of HMA per year. Aggregate, oil, and propane will be delivered to the site and HMA will be delivered from the site.

Summary of Cumulative Impacts

In this summary section, mitigated impacts and immitigable impacts will be discussed. Checklist Item criteria that will result in No Impact are discussed in Chapter 3 and are not reiterated here.

Unavoidable Impacts

There are no significant and unavoidable impacts. All potentially significant cumulative impacts have been reduced below a level of significance through mitigation.

Less Than Significant Impact With Mitigation

All impacts that can be effectively mitigated are listed below in **Table 4-2**.

Table 4-2. Checklist Items with Less Than Significant Impacts with Mitigation

Impact Section	Checklist Item #	Checklist Criteria
Biological Resources	3.4 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 Game or U.S. Fish and Wildlife Service?
Biological Resources	3.4 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 Game or U.S. Fish and Wildlife Service?
Biological Resources	3.4 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?
Cultural Resources	3.5 a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?
Cultural Resources	3.5 b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
Cultural Resources	3.5 c)	Disturb any human remains, including those interred outside of formal cemeteries?
Geology and Soils	3.7 f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
Public Services	3.15 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?
Tribal Cultural Resources	3.18 a)	Would the Project 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: • 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)?
Tribal Cultural Resources	3.18 b)	Would the Project 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: • 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?

See Chapter 8 Mitigation Monitoring and Reporting Program for a comprehensive list of Mitigation Measures to be implemented as part of the proposed Project.

Less Than Significant Impact

All impacts that are Less Than Significant are listed in **Table 4-3**.

Table 4-3. Checklist Items with Less Than Significant Impacts

Impact Section	Checklist Item #	Checklist Criteria
Aesthetics	3.1 c)	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?
Aesthetics	3.1 d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
Agriculture and Forestry Resources	3.2 b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?
Agriculture and Forestry Resources	3.2 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?
Air Quality	3.3 a)	Conflict with or obstruct implementation of the applicable air quality plan?
Air Quality	3.3 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?
Air Quality	3.3 c)	Expose sensitive receptors to substantial pollutant concentrations?
Air Quality	3.3 d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?
Biological Resources	3.4 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?
Energy	3.6 a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
Geology and Soils	3.7 a)	a) Directly or indirectly cause potential substantial adverse effects, including 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? ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides?
Geology and Soils	3.7 b)	Result in substantial soil erosion or the loss of topsoil?
Geology and Soils	3.7 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?
Geology and Soils	3.7 d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Code (1994), creating substantial direct or indirect risks to life or property?
Geology and Soils	3.7 e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Table 4-3. Checklist Items with Less Than Significant Impacts

Impact Section	Checklist Item #	Checklist Criteria
Greenhouse Gas Emissions	3.8 a)	Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
Hazards and Hazardous Materials	3.9 a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Hazards and Hazardous Materials	3.9 b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
Hazards and Hazardous Materials	3.9 c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
Hazards and Hazardous Materials	3.9 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?
Hazards and Hazardous Materials	3.9 f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
Hazards and Hazardous Materials	3.9 g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?
Hydrology and Water Quality	3.10 a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
Hydrology and Water Quality	3.10 b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
Hydrology and Water Quality	3.10 c)	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 off-site; 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?
Hydrology and Water Quality	3.10 d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
Hydrology and Water Quality	3.10 e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?
Land Use and Planning	3.11 b)	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?
Noise	3.13 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 a local general plan or noise ordinance or applicable standards of other agencies?
Recreation	3.16 a)	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?

Table 4-3. Checklist Items with Less Than Significant Impacts

Impact Section	Checklist Item #	Checklist Criteria
Transportation	3.17 a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
Transportation	3.17 c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
Transportation	3.17 d)	Result in inadequate emergency access?
Utilities and Service Systems	3.19 b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
Utilities and Service Systems	3.19 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 reduction goals?
Wildfire	3.20 b)	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: • Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
Wildfire	3.20 c)	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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?
Wildfire	3.20 d)	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: • 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?

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5 Alternatives

5.1 Introduction

CEQA Guidelines Section 15126.6 requires that a reasonable range of alternatives to the proposed Project be discussed in the EIR. Specific requirements include the following:

CEQA Guidelines §15126.6(a): Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

CEQA Guidelines §15126.6(b): Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

CEQA Guidelines §15126.6(c): Selection of a Range of Reasonable Alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

CEQA Guidelines §15126.6(d): Evaluation of Alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

CEQA Guidelines §15126.6(e): "No Project" Alternative:

1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

2) The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

3) A discussion of the "no project" alternative will usually proceed alone one of two lines:

   A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

   B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

   C) After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

CEQA Guidelines §15126.6(f): (f) Rule of Reason. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.

1) Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

2) Alternative Locations.

    A) **Key question.** The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

    B) **None feasible.** If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location.

    C) **Limited new analysis required.** Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative.

3) An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remove and speculative.

"CEQA Guidelines §15021: Duty to Minimize Environmental Damage and Balance Competing Public Objectives

a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.

    1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.

    2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.

d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment."[1]

5.2 Factors Considered in Analysis of Alternatives

In this Alternatives analysis, the following criteria will be used:

Evaluation Criteria 1: Project Specific Elements

The proposed Project involves the construction of a utility-scale PV solar facility on approximately 3,614 acres of privately-owned land. The proposed Project will generate up to 700 MW of alternating current on a daily basis. Power generated by the proposed Project will be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line.

The proposed Project will include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, energy storage system (ESS), access roads and fencing, and on-site substation. An operations and maintenance building may be constructed on the site.

Evaluation Criteria 2: Project Objectives

- Construct and operate a solar energy facility capable of producing up to 700 MW AC of electricity and/or 700 MW AC of energy storage to assist the State of California in achieving its 50 percent renewable portfolio standard by 2030;
- To provide energy to the electric grid to meet increasing demand for in-state generation;
- To facilitate enhanced grid operation by constructing and operating a solar energy generation facility coupled with energy storage system;
- Integrate operating facilities with the existing Vestal substation to connect power generated by the Project into the electricity grid;
- Interconnect directly to the Southern California Edison (SCE) electrical transmission system;
- Operate a renewable energy facility that does not produce significant noise nor emit any greenhouse gases (GHGs);
- Help reduce reliance on foreign sources of fuel;
- Supply on-peak power to the electrical grid in California;
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006);

[1] CEQA Guidelines, Section 15021.

- Provide an investment in California and Tulare County that would create jobs and other economic benefits;
- Support and implement the efforts made by the County of Tulare to address climate change through its General Plan and Climate Action Plan;
- Minimize environmental impacts by locating in a suitable rural setting near existing power grid connections lines; and.
- Minimize environmental impacts by locating the facility in a remote location.

Evaluation Criteria 3: Operational Efficiency

As the proposed Project involves the construction and operation of a solar energy generation facility, operational efficiency is a major concern in the long-term viability of the facility. Operational efficiency affects both operational costs and operational effectiveness through the maximization of equipment use.

Evaluation Criteria 4: Lessen Significant Impacts

According to CEQA, a valid Project alternative should be capable of meeting most of the Project objectives and lessening potential significant impacts associated with the Project. Reasonable alternatives are those that may reduce the extent and magnitude of Project, site, and cumulative significant impacts.

Evaluation Criteria 5: Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if a site for a particular alternative is too small or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

5.3 Alternatives Considered but Rejected

5.3.1 Alternative Site

Section 15126.6(f)(2) of the CEQA Guidelines addresses alternative locations for a project. The key question and first step in the analysis is whether any of the significant effects of the proposed Project would be avoided or substantially lessened by putting the proposed project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the Project need to be considered for inclusion in the EIR. Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the Project Applicant can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the Applicant).

The Applicant does not have control of an alternate site; if control were viable, the Applicant would have to re-initiate the application process as a new project. Similar to the proposed Project site, an alternate site would require environmental review once the Applicant has prepared sufficient project description information. At present, the Applicant does not have control of an alternate site. This alternative would be the most complex, costly, and time-consuming alternative to implement. It is unknown if the environmental impacts associated with this Alternative would be less than the proposed Project because it would be speculative to evaluate an unsecured alternate site. This is primarily due to the fact that the Applicant does not have control of an alternate site. Therefore, this Alternative is not superior to the proposed Project and is rejected from further analysis.

5.4 Alternatives Analysis

5.4.1 Alternative 1: No Project

The No Project Alternative assumes that the Project, as proposed, would not be implemented and the Project site will not be further developed with a solar energy facility.

Compared to the proposed Project, the No Project Alternative would avoid all potential construction- and operations-related impacts related to air quality, agricultural resources, biological resources, cultural resources, hazards and hazardous materials, noise, and traffic.

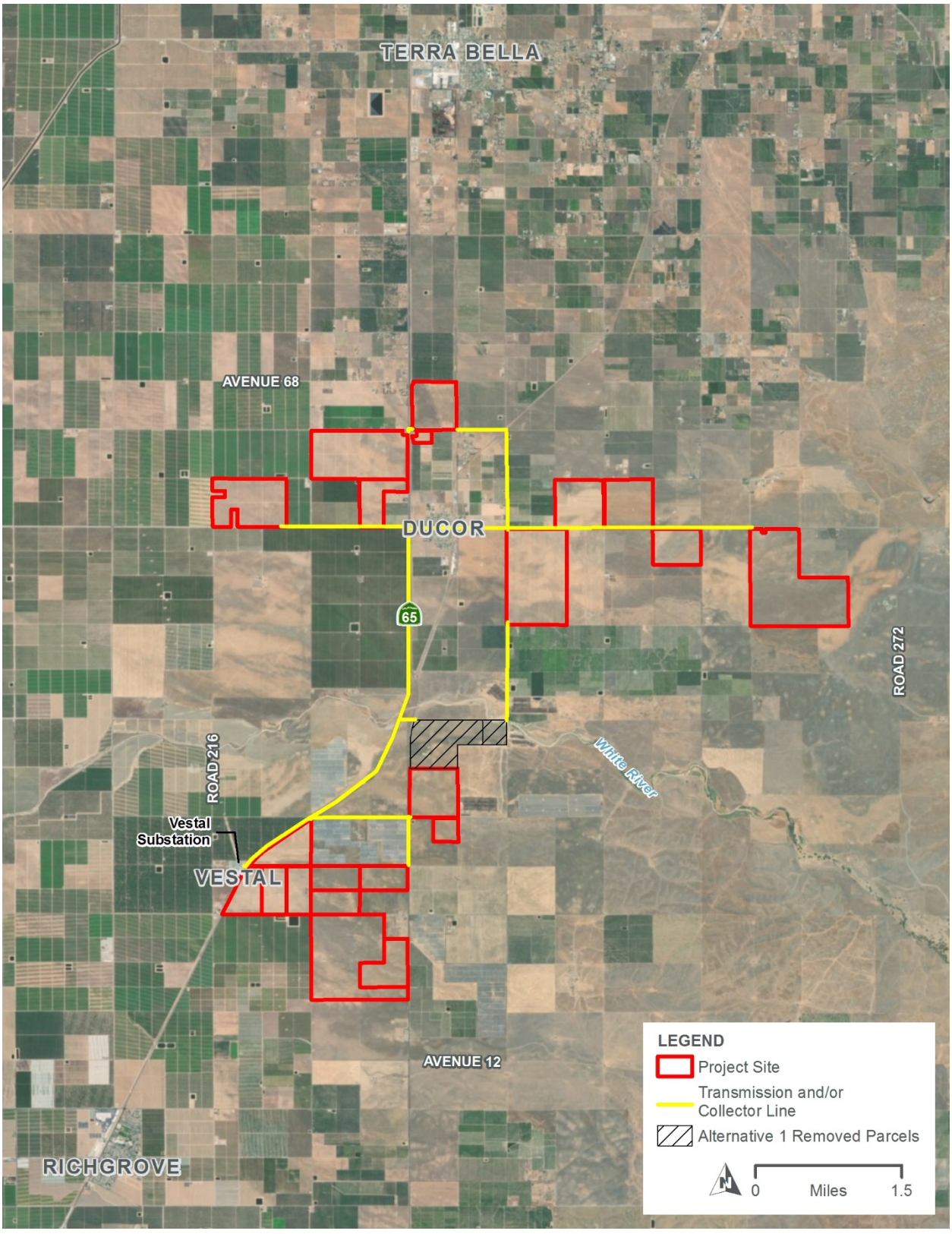
The No Project Alternative is theoretically feasible; however, it would fail to meet any of the Project objectives. Further, while this alternative may lessen certain site specific environmental impacts as noted, it would also reduce the State of California's ability to achieve a number of other broader legislative environmental goals as well. Not constructing this alternative energy source project could, in the broader state-wide context, result in greater environmental impacts overall or in the cumulative analysis. In this case, without the proposed Project, there would be a continuing escalation of impacts on the environment related to ongoing increases in demand for and use of fossil fuels for energy, and thereby, greater impacts to air quality from greenhouse gases and associated secondary health effects to human, plant and animal life.

5.4.2 Alternative 2: Reduced Project Site – Setback from White River

Alternative 2 would involve the reduction in the size of the Project site to minimize, reduce, or avoid potentially significant impacts on biological resources and cultural resources associated with the White River. The Project site would be reduced by 228 acres from 3,614 acres to 3,386 acres. As shown in **Figure 5-1,** Alternative 2 would remove the Project parcels located adjacent to the White River. Specifically, the following Project parcels would be removed:

- APN 339-050-013 – 188 acres
- APN 339-050-004 – 40 acres.

Figure 5-1. Alternative 2: Reduced Project Site – Setback from White River



As discussed in Section 3.4, Biological Resources, of this EIR, the White River is considered waters of the state and fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB) under the Porter-Cologne Act. The White River is also under California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to the California Fish and Game Code (CFGC). The White River also provides potentially suitable habitat for the federally threatened vernal pool fairy shrimp, western spadefoot, and Swainson's hawk (two willow trees present at the White River).

As discussed in Section 3.5, Cultural Resources, of this EIR, the Project site is traversed by the White River. Water sources such as the White River provide an abundance of natural resources and are generally favorable for human habitation; thus, areas surrounding rivers are almost ubiquitously considered sensitive for cultural resources. Additionally, rivers often result in alluvial deposition in their floodplains, which can result in the burying of archaeological deposits.

Alternative 2 would remove the Project parcels located adjacent to the White River; increasing the setback from the White River and therefore reducing the potentially significant impacts on biological resources and cultural resources described above.

Alternative 2 would meet the Project objectives of assisting the implementation of AB 32 and the County's Climate Action Plan, but potentially at a lesser contribution than the proposed Project due to a reduced MW output. As shown in **Table 5-1**, Alternative 2 would have less impacts on the following resource areas compared to the proposed Project: biological resources, cultural resources, and tribal cultural resources. The majority of the environmental impacts under Alternative 2 would be similar to the proposed Project.

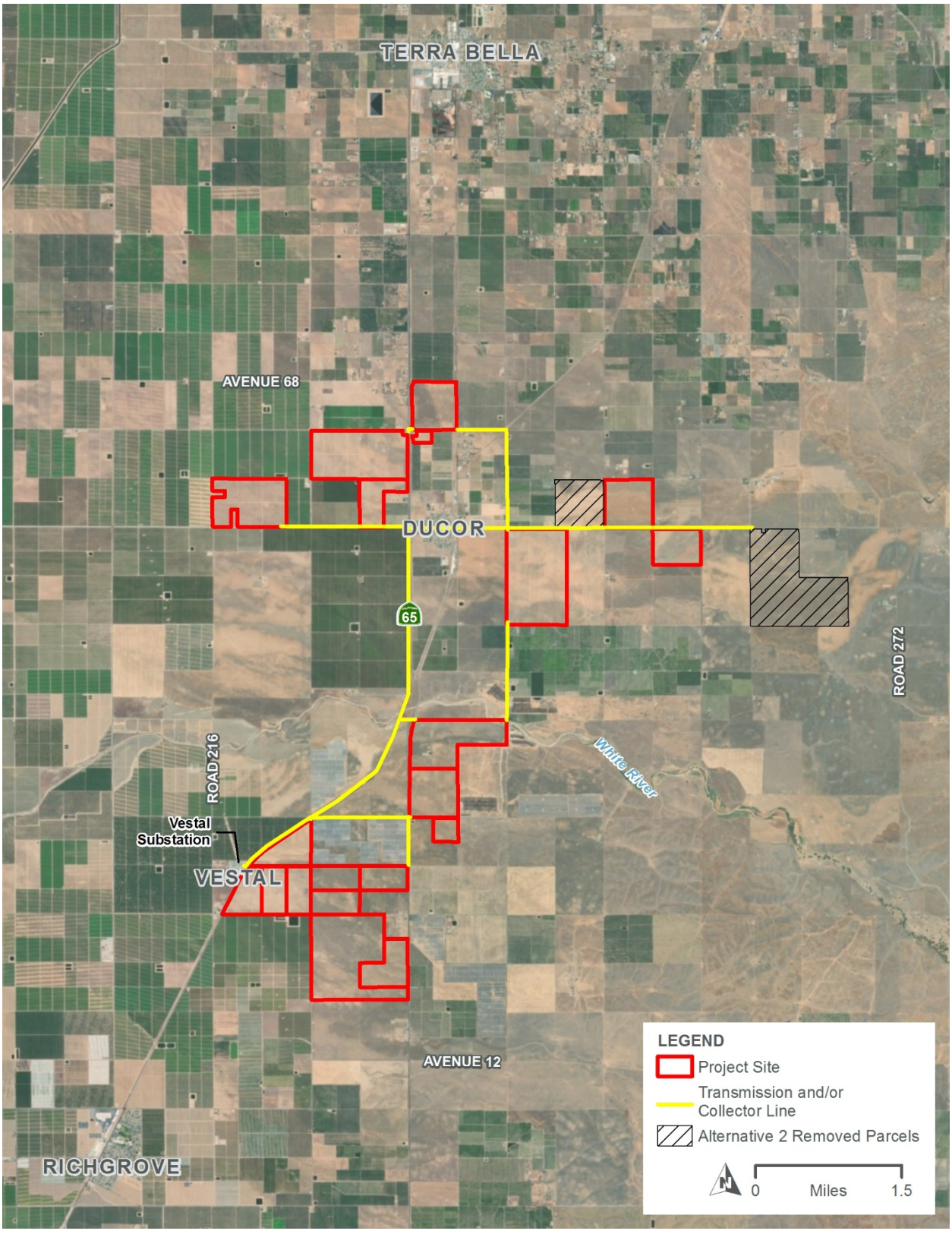
5.4.3 Alternative 3: Reduced Project Site – Avoid Isolated Seasonal Wetlands

As described in Section 3.4, Biological Resources, of this EIR, nineteen isolated seasonal wetlands are present within the Project area. Seven isolated seasonal wetlands are located in the parcel north of Avenue 56 and east of Road 244 (APN 321-070-014) (see **Figure 3.4-2** in Section 3.4, Biological Resources, of this EIR), and twelve in the eastern-most parcels south of Avenue 56 (APNs 323-040-006, -007, and -008) (see **Figure 3.4-4** in Section 3.4, Biological Resources, of this EIR). The isolated seasonal wetlands are considered waters of the state and fall under the jurisdiction of the RWQCB under the Porter-Cologne Act.

Alternative 3 would involve the reduction in the size of the Project site to minimize, reduce, or avoid potentially significant impacts on biological resources (isolated seasonal wetlands). The Project site would be reduced by 638 acres from 3,614 acres to 2,976 acres. As shown in **Figure 5-2,** Alternative 3 would remove the Project parcels containing isolated seasonal wetlands. Specifically, the following Project parcels would be removed:

- APN 323-040-006 – 160 acres
- APN 323-040-007 – 158acres
- APN 323-040-008 – 160 acres
- APN 321-070-014 – 160 acres.

Figure 5-2. Alternative 3: Reduced Project Site – Avoid Isolated Seasonal Wetlands



Alternative 3 would meet the Project objectives of assisting the implementation of AB 32 and the County's Climate Action Plan, but potentially at a lesser contribution than the proposed Project due to a reduced MW output. As shown in **Table 5-1**, Alternative 3 would have less impacts on biological resources compared to the proposed Project. The majority of the environmental impacts under Alternative 3 would be similar to the proposed Project.

5.5 Environmentally Superior Alternative

Table 5-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed Project. As shown in **Table 5-1**, the No Project Alternative would be considered the environmentally superior alternative, since it would avoid all potential construction-and operations-related impacts related to the proposed Project. However, CEQA Guidelines Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

The environmentally superior alternative would be Alternative 2. As shown in **Table 5-1**, Alternative 2 would have less impacts on the following resource areas compared to the proposed Project: biological resources, cultural resources, and tribal cultural resources.

Table 5-1. Alternatives Impact Assessment

Impact Topic	Proposed Project	Alternative 1 - No Project	Alternative 2 – Setback from White River	Alternative 3 – Avoid Isolated Seasonal Wetlands
Aesthetics	Less Than Significant	Less	Similar	Similar
Agriculture and Forestry Resources	Less Than Significant	Less	Similar	Similar
Air Quality	Less Than Significant	Less	Similar	Similar
Biological Resources	Less Than Significant with Mitigation	Less	Less	Less
Cultural Resources	Less Than Significant with Mitigation	Less	Less	Similar
Energy	Less Than Significant	Less	Similar	Similar
Geology and Soils	Less Than Significant	Less	Similar	Similar
Greenhouse Gas Emissions	Less Than Significant	Less	Similar	Similar
Hazards and Hazardous Materials	Less Than Significant	Less	Similar	Similar
Hydrology and Water Quality	Less Than Significant	Less	Similar	Similar
Land Use and Planning	Less Than Significant	Less	Similar	Similar
Mineral Resources	No Impact	Less	Similar	Similar
Noise	Less Than Significant	Less	Similar	Similar
Population and Housing	No Impact	Less	Similar	Similar
Public Services	Less Than Significant	Less	Similar	Similar
Recreation	Less Than Significant	Less	Similar	Similar
Transportation	Less Than Significant	Less	Similar	Similar
Tribal Cultural Resources	Less Than Significant with Mitigation	Less	Less	Similar
Utilities and Service Systems	Less Than Significant	Less	Similar	Similar
Wildfire	Less Than Significant	Less	Similar	Similar

Table 5-1. Alternatives Impact Assessment

Impact Topic	Proposed Project	Alternative 1 - No Project	Alternative 2 – Setback from White River	Alternative 3 – Avoid Isolated Seasonal Wetlands
Mandatory Findings of Significance	Less Than Significant with Mitigation	Less	Similar	Similar

6 Economic, Social, and Growth-Inducing Effects

6.1 Introduction

This chapter discusses economic, social and growth inducing effects of the proposed Project. **Table 6-1** provides the CEQA requirements and a summary of the impact analysis.

Table 6-1. Summary of Economic, Social and Growth Inducing Impacts

Topic	Summary of Impact	CEQA Requirement
Economic Impact	The proposed Project will not result in negative impacts to the region. It will result in increases in economic benefits as the Project is anticipated to provide up to 20 permanent jobs.	CEQA does not have specific requirements for evaluating the economic impacts of a proposed Project. Section 15131 of CEQA Guidelines states that "Economic or social information may be included in an EIR or may be presented in whatever form the agency desires."
Social Impact	The proposed Project will not result in disproportionate environmental effects on minority populations, low-income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that will require mitigation.	The social impacts of a project include environmental justice considerations. California Government Code Section 65040.12 defines Environmental Justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies."
Growth Inducing Effect	The proposed Project will not result in significant growth inducing impacts. The proposed Project will result in the creation of temporary construction jobs and approximately 20 permanent jobs, which is not considered to be an employment base at such a level as to create growth inducing impacts. The Project does not involve the construction of new housing. Growth inducing impacts will be less than significant.	CEQA Guidelines § 15126 (d) makes recommendations for analyzing impacts due to growth inducement, including discussing ways in which the project could foster economic or population growth, the construction of additional housing, or other factors which could remove obstacles to population growth or encourage and facilitate other activities which could impact the environment individually or cumulatively.

Based on the information provided in **Table 6-1**, implementation of the proposed Project will result in ***Less Than Significant*** environmental impacts, either individually or cumulatively, caused by either economic, social, or growth-inducing effects. No mitigation measures are required.

6.2 Demographics

"The unemployment rate in the Tulare County was 11.0 percent in January 2020, up from a revised 9.3 percent in December 2019, and below the year-ago estimate of 11.4 percent. This compares with an unadjusted unemployment rate of 4.3 percent for California and 4.0 percent for the nation during the same period."[1] The general demographic information can be found in **Table 6-2**.

[1] State of California Employment Development Department, Labor Market Information. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/visa$pds.pdf. Accessed March 2020.

Table 6-2. Profile of General Population and Housing Characteristics

Demographic Profile Data	Tulare County
Population (2017)[2]	
Total	464,493
% Hispanic or Latino	64.7%
% not Hispanic or Latino	35.3%
White alone	28.4
Black or African American alone	1.4%
Asian alone	2.9%
Some other race alone	0.1%
Two or more races	1.8%
Housing (2018)[3]	
Total housing units	150,217
Occupied housing units	139,197
Vacant housing units	11,020
Owner-occupied housing units	81,862
Renter-occupied housing units	57,335
Homeowner vacancy rate (%)	0.9
Renter vacancy rate (%)	2.6

6.3 Economic Effects

Section 15131 of the CEQA Guidelines states:

"Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.

(a) Economic or social effects of a project shall not be treated as significant effects on the environment. But rather, an EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

(b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious

[2] U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates. Table DP-05.

[3] U.S. Census Bureau, 2018 American Community Survey 1-Year Estimates. Table DP-04.

practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

(c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project."[4]

Economic and Social Benefits of the Proposed Project

The proposed Project will provide multiple economic and social benefits as follows:

- Addition of up an anticipated 20 new permanent jobs;
- Assists the State of California in achieving its 50 percent Renewable Portfolio Standard (RPS) by 2030;
- Help California meet its statutory and regulatory goal of increasing renewable power generation, including GHG reduction goals of AB 32 (California Global Warming Solutions Act of 2006); and
- Supply on-peak power to the electrical grid in California.

6.4 Social Effects

Environmental Justice

"The basis for environmental justice lies in the Equal Protection Clause of the U.S. Constitution. The Fourteenth Amendment expressly provides that the states may not "deny to any person within [their] jurisdiction the equal protection of the laws" (U.S. Constitution, amend. XIV, Section1).

On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898, titled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The executive order followed a 1992 report by the U.S. Environmental Protection Agency (U.S. EPA) indicating that "[r]acial minority and low-income populations experience higher than average exposures to selected air pollutants, hazardous waste facilities, and other forms of environmental pollution." Among other things, E.O. 12898 directed federal agencies to incorporate environmental justice into their missions."[5]

As evidenced by the analysis in 3.14, Population and Housing, of this DEIR, the proposed Project is not within an established community. The Project site is near the unincorporated community of Ducor. The Project site is generally surrounded by existing agricultural uses including dry-land grain, irrigated

[4] State of California, Natural Resources Agency, Guidelines for the Implementation of the California Environmental Quality Act (CEQA). Section 15131. http://resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf. Accessed March 2020.

[5] State of California, General Plan Guidelines 2003. Page 22. http://opr.ca.gov/docs/General_Plan_Guidelines_2003.pdf. Accessed March 2020.

crops, and grazing lands and scattered rural residences and agricultural-related structures. Although the DEIR identifies some potentially significant impacts that could result from the proposed Project, the DEIR also indicates these impacts can all be reduced or avoided through the adoption and implementation of Project design features and feasible and reasonable Mitigation Measures.

6.5 Growth-Inducing Effects

As outlined in the CEQA Guidelines § 15126.2 (e), growth-inducing impacts of the proposed Project should "[d]iscuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."[6]

Projects promoting direct growth will impose burdens on a community by directly inducing an increase in population, or resulting in the construction of additional developments in the same area. For example, projects involving the expansion, modifications, or additions to infrastructure, such as sewer, water, and roads, could have the potential to directly promote growth by removing existing physical barriers or allowing for additional development through capacity increases. New roadways leading into a previously undeveloped area directly promote growth by removing previously existing physical barriers to development and a new wastewater treatment plant would allow for further development within a community by increasing infrastructure capacity. Because these types of infrastructure projects directly serve related projects and result in an overall impact to the local community, associated impacts cannot be considered isolated. Indirect growth typically includes substantial new permanent employment opportunities and can result from these aforementioned modifications.

The proposed Project is located within the unincorporated area of Tulare County and it does not involve the development of permanent residences that will directly result in population growth in the area. As previously state above, the unemployment rate in the Tulare County was 11.0 percent in January 2020. The applicant expects to utilize construction workers from the local and regional area, a workforce similar to that involved in the development of other utility-scale solar facilities. Based on the unemployment rate, and the availability of the local workforce, construction of the proposed Project will not have a growth-inducing effect related to workers moving into the area and increasing the demand for housing and services.

Once construction is completed, it is expected that the proposed Project will require an operational staff of up to 20 full-time employees. The proposed Project will not result in substantial population growth, as the number of employees required to operate and maintain the facility is minimal.

While the proposed Project will contribute to energy supply, which indirectly supports population growth, the proposed Project is a response to the state's need for renewable energy to meet its RPS, and while it will increase the availability of renewable energy, it will also replace existing sources of non-renewable energy. Unlike a gas-fired power plant, the proposed Project is not being developed as a source of base-load power in response to growth in demand for electricity. The power generated

[6] CEQA Guidelines, Section 15126.2 (e).

will be added to the state's electricity grid with the intent that it will displace fossil fueled power plants and their associated environmental impacts, consistent with the findings and declarations in SB 2 that a benefit of the RPS is displacing fossil fuel consumption within the state. The Project is being proposed in response to state policy and legislation promoting development of renewable energy.

The proposed Project will supply energy to accommodate and support existing demand and projected growth, but the energy provided by the Project will not foster any new growth because (1) the additional energy will be used to ease the burdens of meeting existing statewide energy demands within and beyond the area of the Project site; and (2) the energy will be used to support already-projected growth; or, (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth will necessarily be too speculative and uncertain to merit further analysis.

Under CEQA, an EIR should consider potentially significant energy implications of a project (CEQA Guidelines Appendix F(II); PRC Section 21100(b)(3)). However, the relationship between the proposed Project's increased electrical capacity and the growth-inducing impacts outside the surrounding area is too speculative and uncertain to warrant further analysis. When a project's growth-inducing impacts are speculative, the lead agency should consider 14 CCR §15145, which provides that, if an impact is too speculative for evaluation, the agency should note this conclusion and terminate discussion of the impact. As the court explained in Napa Citizens for Honest Gov't v. Napa County Board of Supervisors, 91 Cal. App.4th 342, 368: "Nothing in the Guidelines, or in the cases, requires more than a general analysis of projected growth" *Napa Citizens, 91* CA4th at 369. The problem of uncertainty of the proposed Project's growth-inducing effects cannot be resolved by collection of further data because of the diversity of factors affecting growth.

While this document has considered that the proposed Project, as an energy project, might foster regional growth, the particular growth that could be attributed to the proposed Project is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the proposed Project. No accurate and reliable data is available that could be used to predict the amount of growth outside the area that will result from the proposed Project's contribution of additional electrical capacity. The County of Tulare has not adopted a threshold of significance for determining when an energy project is growth-inducing. Further evaluation of this impact is not required under CEQA.

Additionally, the Project will not involve the development of any new roadways, new water systems, or sewer and thus, the project will not further facilitate additional development into outlying areas. For these reasons, the proposed Project will not be growth-inducing.

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7 Immitigable Impacts

7.1 Environmental Effects That Cannot Be Avoided

Under CEQA Guidelines Section 15126.2 (b), "[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the Project is being proposed, notwithstanding their effect, should be described."[1] This analysis should include a description of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.

The proposed Project will not result in a significant and unavoidable impact. All impacts have been found to be Less Than Significant or have been mitigated to a level considered Less Than Significant.

7.2 Irreversible Impacts

Under CEQA Guidelines Section 15126.2 (c), "[u]ses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)"[2]

Energy resources needed for the construction of the proposed Project will contribute to the incremental depletion of renewable and non-renewable resources. Resources, such as timber, used in building construction are generally considered renewable and will ultimately be replenished. Non-renewable resources, such as petrochemical construction materials, steel, copper, lead and other metals, gravel, concrete, and other materials, are typically considered finite and will not be replenished over the lifetime of the Project. Thus, the project will irretrievably commit resources over the anticipated 35-year life of the Project.

At the end of the Project's operation term, the applicant may determine that the Project should be decommissioned and deconstructed. Should the Project be decommissioned, the Project applicant is required to restore land to its pre-project state. Consequently, some of the resources on the site could potentially be retrieved after the site has been decommissioned. Concrete footings, foundations, and pads will be removed and recycled at an off-site location. All remaining components will be removed, and all disturbed areas will be reclaimed and recontoured. The applicant anticipates using the best available recycling measures at the time of decommissioning.

Implementation and operation of the proposed Project will promote the use of renewable energy and contribute incrementally to the reduction in demand for fossil fuel use for electricity-generating purposes. Therefore, the incremental reduction in fossil fuels will be a positive and beneficial effect of the commitment of nonrenewable resources. Additionally, the Project is consistent with the state's

[1] CEQA Guidelines. Section 15126.2 (b).

[2] Ibid. Section 15126.2 (c).

definition of an “eligible renewable energy resource” in Section 399.12 of the California Public Utilities Code and the definition of “in-state renewable electricity generation facility” in Section 25741 of the California PRC.

7.3 Statement of Overriding Considerations

As contained in CEQA Guidelines Section 15043, “[a] public agency may approve a Project even though the Project would cause a significant effect on the environment, if the agency makes a fully informed and publicly disclosed decision that:

a) There is no feasible way to lessen or avoid the significant effect (see Section 15091); and

b) Specifically identified expected benefits from the Project outweigh the policy of reducing or avoiding significant environmental impacts of the Project.”[3]

“An agency may prepare a statement of overriding considerations. As noted in CEQA Guidelines Section 15093, “CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed Project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable.”[4]

“When the lead agency approves a Project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.”[5]

“If an agency makes a statement of overriding considerations, the statement should be included in the record of the Project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.”[6]

Based on the analysis contained in this DEIR, there are no environmental impacts that cannot be avoided nor are there any irreversible impacts. Therefore, a Statement of Overriding Considerations is not necessary.

7.4 Project Benefits Statements

Project Benefit #1: Jobs Creation

The proposed Project is anticipated to create temporary construction jobs and up to 20 new full-time jobs.

[3] Ibid. Section 15043.

[4] Ibid. Section 15093 (a).

[5] Ibid. Section 15093 (b).

[6] Ibid. Section 15093 (c).

Project Benefit #2: Implementation of Assembly Bill (AB) 32

AB 32 has defined plans and programs for year 2020, with the vision of year 2050 that sets a goal to reduce 80% of greenhouse gas (GHG) compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan that includes a series of measures adopted by the California Air Resources Board (ARB) AB32 Scoping Plan and the State's Renewable Portfolio Standard (RPS) which calls for increasing renewable electricity in the State. The Scoping Plan's intent is to reduce California GHG emissions, and the very nature of the proposed Project will represent improvements beyond what can be considered "business as usual" (BAU). Assuming BAU would be fossil fueled electricity generation sources, the proposed Project will reduce GHG emissions.

Project Benefit #3: General Plan Update 2030 – Climate Action Plan

"The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan build-out. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation."[7]

The proposed Project was developed to support and implement the policies adopted by the County of Tulare to address climate change through its General Plan and CAP. The proposed Project is intended to increase the amount of renewable energy put into the existing electrical grid. In addition, the facility will assist in meeting state greenhouse gas emissions reductions by providing an alternative source of renewable energy to reduce Tulare County's fossil fuel dependency.

Project Benefit #4: CEQA Guidelines Appendix F – Energy Conservation

According to Appendix F of the State CEQA Guidelines, the goal of conservation energy implies wise and efficient use of energy including decreasing reliance on natural gas and oil and increasing reliance on renewable energy resources. "Energy conservation implies that a project's cost effectiveness is reviewed not only in dollars, but also in terms of energy requirements." The proposed Project itself will achieve this goal because it will create a renewable source of energy. The Project will assist the State in offsetting the use of nonrenewable resources to produce energy, and contribute to an overall reduction in nonrenewable resources currently consumed to generate electricity. The objective of the proposed Project is to assist California in meeting its target goals for electric retail sellers to provide 50 percent of their electricity load with renewable energy by 2030, identified in California's Renewable Portfolio Standard.

[7] Tulare County Climate Action Plan. Page 1.

Project Benefit #5: Implementation of Countywide General Plan Policies

The proposed Project will implement the following County General Plan policies:

AG-2.11 Energy Production. The County shall encourage and support the development of new agricultural related industries featuring alternative energy, utilization of agricultural waste and solar or wind farms.

ERM-4.3 Local and State Programs. The County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources.

ERM-4.6 Renewable Energy. The County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind, solar, bio-fuels and co-generation.

8 Mitigation Monitoring and Reporting Program

This Draft Mitigation Monitoring and Reporting Program (MMRP) has been prepared in compliance with State law and based upon the findings of the Draft Environmental Impact Report (EIR) for the proposed Project. The MMRP lists mitigation measures recommended in the Draft EIR for the proposed Project and identifies monitoring and reporting requirements.

The CEQA Public Resources Code Section 21081.6 requires the Lead Agency decision making body is going to approve a project and certify the EIR that it also adopt a reporting or monitoring program for those measures recommended to mitigate or avoid significant/adverse effects of the environment identified in the EIR. The law states that the reporting or monitoring program shall be designed to ensure compliance during project implementation. The MMRP is to contain the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when and by whom and compliance will be monitored and reported and to whom it will be report. As necessary the reporting should indicate any follow-up actions that might be necessary if the reporting notes the impact has not been mitigated.
- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon the recommendations by those responsible for the MMRP. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Table 8-1 presents the Mitigation Measures identified for the proposed Project in this EIR. The first column of the table identifies the Mitigation Measure. The second column, entitled “Monitoring Timing/Frequency,” identifies the time the Mitigation Measure should be initiated and the frequency of the monitoring that should take place to assure the mitigation is being or has been implemented to achieve the desired outcome or performance standard. The third column, “Action Indicating Compliance,” identifies the requirements of compliance with the Mitigation Measure. The fourth column, “Monitoring Agency,” names the party ultimately responsible for ensuring that the Mitigation Measure is implemented. The fifth column, “Person/Agency Conducting Monitoring/Reporting” names the party/agency/entity responsible for verification that the Mitigation Measure has been implemented. The last three columns will be used by the Lead Agency (County of Tulare) to ensure that individual Mitigation Measures have been complied with and monitored.

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Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
Biological Resources						
3.4-1. San Joaquin Adobe Sunburst. A pre-construction survey for San Joaquin Adobe Sunburst within fallow agricultural fields and vegetation surrounding isolated wetlands within the Project site will be conducted by a qualified botanist during its blooming period (February- April) following CDFW and USFWS special-status plant survey guidelines to determine if populations are present. If detected, San Joaquin adobe sunburst locations within the Project site will be flagged, and a 150-foot avoidance buffer established. If avoidance is not feasible, consultation with USFWS and CDFW to determine compensatory mitigation measures would occur before construction-related activity could continue.	Prior to issuance of grading permits	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW			
3.4-2. San Joaquin Kit Fox. A pre-construction clearance survey for San Joaquin kit fox shall be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas shall include the entire Project site and all undeveloped habitat within 200 feet. If no potential dens are located, construction-related activity may proceed. If a potential den is located, an infrared camera trap shall be placed at the den entrance for three days to confirm species occupancy. If San Joaquin kit fox use is observed, the den shall be avoided and the USFWS shall be contacted. Construction-related activities shall adhere to the avoidance and minimization measures outlined in the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), outlined below: 3.4-2. a. Project-related vehicles shall observe a 20-mph speed limit in all Project areas, except on County roads and State and Federal highways; this is particularly important at night when kit fox are most active. To the extent possible, night-time construction-related activity shall be minimized. Off-road	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable.	County of Tulare Planning Department and/or CDFW			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure		Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	traffic outside of designated Project areas shall be prohibited.						
3.4-2.b.	To prevent inadvertent entrapment of kit fox or other animals during the construction-related activity phase of the Project, all excavated, steep-walled holes or trenches more than two (2) feet deep shall be covered at the close of each working day by plywood or similar materials or provided with one (1) or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS shall be notified within three days of the discovery.						
3.4-2.c.	All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction-related activity or Project site.						
3.4-2.d.	No firearms or pets shall be allowed on the Project site.						
3.4-2.e.	Use of rodenticides and herbicides in Project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit fox and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, California						

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
Department of Pesticide Regulation, and other State and Federal legislation, as well as additional Project-related restrictions deemed necessary by the USFW Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.						

3.4-3. Worker Environmental Awareness Program. Prior to the issuance of grading or building permits, and for the duration of construction-related activities, all new construction workers at the Project site shall attend a Worker Environmental Awareness Program (WEAP), developed and presented by the Project Lead Biologist. The WEAP shall be presented by the Lead Biologist and shall include information on the life history of each federal and state-listed species, as well as other special-status wildlife, natural communities, and plant species that may be encountered during construction-related activities, their legal protections, the definition of "take" under the federal and state endangered species acts, measures the Project operator is implementing to protect special-status species, reporting requirements, specific measures that each worker shall employ to avoid take of special-status wildlife species, and penalties for violation of the Federal Endangered Species Act and California Endangered Species Act. A fact sheet conveying this information shall be prepared for distribution to contractors, employees, and anyone else who may enter the Project site. WEAP training shall be documented as follows: 3.4-3a. An acknowledgement form signed by each worker indicating that environmental training has been completed. 3.4-3b. A sticker that shall be placed on hard hats indicating that the worker has completed the environmental training. Construction workers shall not be permitted to operate equipment within the construction area unless they have attended the training and are wearing hard hats with the required sticker. 3.4-3c. A copy of the training transcript/training video and/or training video, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgements forms shall be submitted to the Tulare County Resource Management Agency.	Prior to issuance of grading or building permits	Retention of professional biologist Verification of signed acknowledgement form by each worker indicating completion of environmental training	County of Tulare Planning Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.4-4. Burrowing Owl. A preconstruction clearance survey for burrowing owls (BUOW) shall be conducted by a qualified biologist no less than 14 days prior to the start of construction-related activities in accordance with the protocols adopted by the CDFW *Staff Report on Burrowing Owl Mitigation* (2012). If burrowing owls are observed on-site or within 500 feet of the site, the following avoidance and minimization measures shall be implemented: 3.4-4.a. A no-disturbance buffer shall be established around occupied burrows. The buffer size may range from 150 feet to 650 feet depending on the time of year and the level of construction-related activity (refer to CDFW 2012). 3.4-4.b. A qualified biologist shall monitor the nest to ensure construction-related activities will not adversely impact the nesting birds and determine when the burrow is no longer occupied. 3.4-4.c. If construction-related activities cannot avoid the active BUOW nest, CDFW shall be consulted regarding passive eviction and mitigation. If necessary, BUOW may be passively relocated from burrows after an exclusion plan is prepared and approved by the CDFW.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable.	County of Tulare Planning Department and/or CDFW			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.4-5. Raptors and Nesting Birds. To avoid impacts to nesting birds, including Swainson's hawk and raptorial species protected by Sections 3503, 3503.5, and 3513 of the CFGC, activities related to the Project (including, but not limited to, vegetation removal, ground disturbance, and construction- and demolition-related activity) shall occur outside of the bird breeding season (February 1 through August 30 for nesting birds; March 1 through September 31 for Swainson's hawk; but variable based on seasonal and annual climatic conditions). Construction-related activity commencing outside of the nesting season does not require any mitigation. If construction-related activities are scheduled to commence during the breeding season, the following mitigation and avoidance measures will be implemented: 3.4-5.a. A pre-construction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal. The survey shall be conducted within the Project site and include a 150-foot buffer for passerines, 500-foot buffer for other raptors, and 0.5-mile buffer for active Swainson's hawk nests. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the region. 3.4-5.b. If nests are found, an appropriate avoidance buffer will be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. For Swainson's hawk nests, an avoidance buffer of up to ½ mile shall be established by a qualified biologist based on the nest location in relation to the Project activity, the line-of-sight from the nest to the Project activity, and observed hawk behavior at the nest. 3.4-5.c. If this buffer is not feasible, or if the Project intends to reduce the buffers based on the	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable.	County of Tulare Planning Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
previously listed criteria, consultation with CDFW is warranted to discuss how these criteria will be implemented and determine if the Project will avoid take. 3.4-5.d. All construction-related personnel shall be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No ground disturbing activities shall occur within the buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist. 3.4-5.e. If take cannot be avoided, take authorization through the issuance of an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081(b) is necessary to comply with the California Endangered Species Act.						
3.4-6. Vernal Pool Fairy Shrimp. To avoid impacts to vernal pool fairy shrimp, the energy generation portions of the Project will be designed and constructed to avoid all mapped potential vernal pool fairy shrimp (VPFS) habitat by 250 feet. Project work that involves rough grading and clearing and grubbing outside of existing roadways and associated right of way, installation of solar arrays and associated facilities, construction staging, and site access, will occur at least 250 feet from potential vernal pool fairy shrimp habitat.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable Verification by County of incorporation of project design features Verification of take permit, if applicable	County of Tulare Planning Department and/or CDFW			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.4-6.a. If vernal pool fairy shrimp habitat cannot be avoided, the applicant shall provide evidence to the Tulare County Resource Management Agency that a Section 2081 ITP from CDFW for vernal pool fairy shrimp (if determined to be required) has been obtained. If it is determined that an ITP is not required, the Project developer/operator shall provide a letter describing the consultation process and wildlife agency determination, indicating that an ITP is not required. The letter shall also identify the CDFW point of contact and contact information.						
3.4-7. Elderberry Shrubs. The Project will be designed to avoid impacts to all mapped elderberry shrub. Prior to construction-related activities, a qualified biologist will identify and flag all individual elderberry shrubs within the Project site during a pre-construction survey. Temporary plastic mesh–type construction fence will be installed at least 20 feet from the driplines of elderberry shrubs adjacent to the Project site to prevent encroachment by construction-related vehicles and personnel.	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable.	County of Tulare Planning Department and/or CDFW			
3.4-8. Jurisdictional Waters. Potentially jurisdictional features should be demarcated with fencing and avoided. If these features cannot be avoided, a jurisdictional wetland delineation shall be conducted to identify and delineate the jurisdictional extent. Permitting by the RWQCB, and/or CDFW may be required, depending on the jurisdictional scope of each feature. Mitigation for fill would be at 1:1 (one (1) acre of	Prior to issuance of grading permits	Verification by County of incorporation of project design features. Verification of permits, if applicable.	County of Tulare Planning Department, and RWQCB and/or CDFW			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
mitigation for each acre of impact) at a minimum. Additional mitigation may be required under agency permits.						
Cultural Resources						
3.5-1. In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the portion of the Project site where the resource is discovered, be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the specialists shall provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recovery, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.	During construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.5-2. Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the	During construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
landowner of the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conclusions occur the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.						
Public Services						
3.15-1. Applicant shall provide an access road to the site and any facilities affected by the Special Use Permit.	Prior to issuance of building permits	County verification prior to issuance of building permit	County of Tulare Planning Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.15-2. Applicant shall submit plans for all new construction, and shall comply with the provisions of the 2019 Cal Green Building Code, Fire Code, Mechanical Code, Electric Code and Plumbing Code, as applicable.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Planning Department			
3.15-3. The Tulare County Fire Department shall be notified of the proposed start date of any processing, storage, or special use granted and mitigated prior to initiation of any building operations.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department and Public Works Department			
3.15-4. Violations of any of these conditions shall result in Tulare County Fire Department's rescission of approval of the Special Use Permit.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department			
3.15-5. Fire Department requires a Knox box to be installed at an approved location to permit entry to the site.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department			
3.15-6. Access gate shall be set back 30 feet from the roadway for fire apparatus access.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department, Planning Department, and Public Works Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.15-7. All combustible vegetation shall be removed from the site and Tulare County Fire Department approved measures taken to prevent the accumulation of the combustible vegetation that would create a fire hazard.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department and Public Works Department			
3.15-8. Access roads shall be provided so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department and Public Works Department			
3.15-9. Access roads shall be a minimum of 20 feet in width (non-obstructed), with a maintained 13 feet 5 inches vertical clearance.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department and Public Works Department			
3.15-10. 20-foot fire access roads shall be constructed so that no portions of the photovoltaic panels are more than 500 feet from a fire apparatus access road or spaced in coordination with the Fire Department.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department and Public Works Department			
3.15-11. Applicant shall be responsible for training fire personnel of facility operations, hazards and emergency procedures for shutting down the operation.	Prior to issuance of building permits	County verification of personnel training and operation certification prior to occupancy.	County of Tulare Fire Department			

Table 8-1. Mitigation Monitoring Reporting Program

Mitigation Measure	Monitoring Timing/Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
3.15-12. Posted address shall be visible from roadway, minimum 4-inch numbers.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department			
3.15-13. If buildings are proposed, National Fire Protection Agency (NFPA) 1142 standards for rural water supplies shall be required.	Prior to issuance of building permits	County verification of approval of site plan design prior to issuance of building permit	County of Tulare Fire Department, Planning Department, and Public Works Department			
Tribal Cultural Resources						
Refer to Cultural Resource **Mitigation Measures 3.5-1 and 3.5-2** above						

9 Report Preparation

9.1 Persons Who Prepared this Report

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified below:

9.1.1 Lead Agency

County of Tulare Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Jason Britt	County Administrative Officer
Reed Schenke	RMA Director/Environmental Assessment Officer
Michael Washam	RMA Associate Director
Aaron Bock	RMA Assistant Director / Economic Development and Planning Branch
Hector Guerra	Chief, Environmental Planning Division
Jessica Willis	Planner IV, Environmental Planning Division

9.1.2 HDR

HDR
3230 El Camino Real, Suite 200
Irvine, CA 92602

Tim Gnibus	Project Manager
Sharyn Del Rosario	Deputy Project Manager
Ronell Santos	Environmental Planner
Anders Burvall	Senior Geographic Information Systems Analyst
Jade Dean	Geographic Information Systems Analyst
Renee Stueber	Document Production Administrator

9.1.3 Technical Report Preparers

Aztec

- Aesthetics Study – *"Rexford Photovoltaic Solar Farms Aesthetics Study"* (included in Appendix "A" of this EIR)

Rincon Consultants, Inc.

- Air Quality and Greenhouse Gas Study – *"Rexford Solar Farm Project Air Quality and Greenhouse Gas Study"* (included in Appendix "C" of this EIR)
- Aquatic Resources Assessment – *"Rexford Solar Farm Project Aquatic Resources Assessment"* (included in Appendix "D" of this EIR)
- Biological Resources Assessment – *"Rexford Solar Farm Project Biological Resources Assessment"* (included in Appendix "D" of this EIR)
- Cultural Resources Assessment – *"Rexford Solar Farm Project Cultural Resources Assessment Report"* (included in Appendix "E" of this EIR)
- Noise Study – *"Rexford Solar Farm Project Noise Study"* (included in Appendix "I" of this EIR)
- Water Supply Assessment – *"Rexford Solar Project Water Supply Assessment"* (included in Appendix "K" of this EIR)

Stantec Consulting Services, Inc.

- Geotechnical Study – *"CEQA Level Geotechnical Study – Tulare County, California"* (included in Appendix "F" of this EIR)
- Traffic Impact Analysis – *"Rexford Solar Farm Project Traffic Impact Analysis – Tulare County*" (included in Appendix "J" of this EIR)

Technicon Engineering Services, Inc.

- Phase I ESA – "*Phase I Environmental Site Assessment – Rexford Solar Farm – Tulare County, California*" (included in Appendix "G" of this EIR)

Westwood Professional Services

- Stormwater Analysis – *"Rexford Solar Project Stormwater Analysis Memorandum"* (included in Appendix "H" of this EIR)

APPENDIX A
AESTHETICS STUDY

Rexford Photovoltaic Solar Farms

AESTHETICS STUDY

REVISION INDEX

Page/Reason	REV	Date	PROD	CHECK	APRV
Draft for Client review	0	11-22-2019	JP	SAS	JDL
Revision – Additional Parcel	1	01-09-2020	JP	SAS	JDL
Revision – BESS addition	2	01-31-2020	JP	SAS	JDL
Revision – Switch technology to SAT	3	04-17-2020	JP	SAS	JDL

Contents

1 Introduction

The purpose of this report is to show the potential visual impact on the landscape due to the construction of the 700 MWac utility scale solar farm with energy storage and transmission lines, known as Rexford Solar Farm in Tulare County, California. The project is composed of multiple parcels and is shown below in Figures 1 and 2.

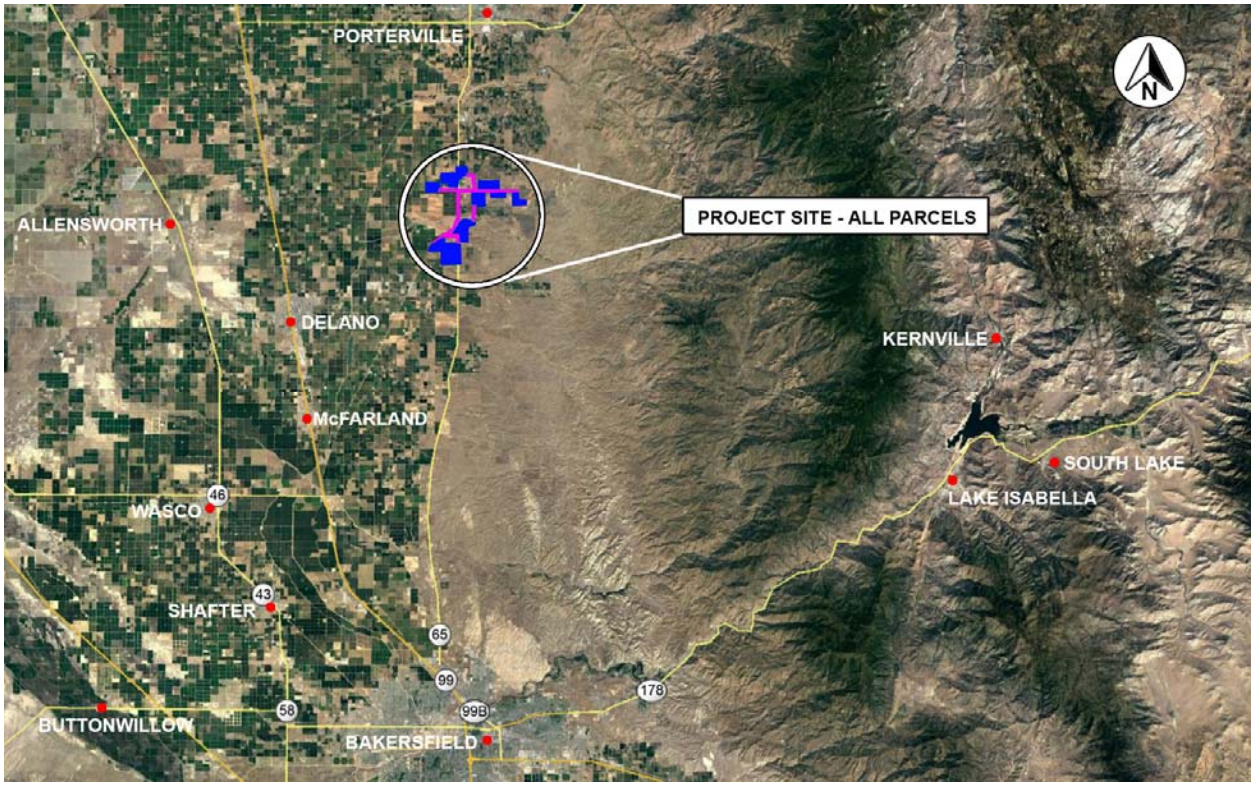

Fig 1 – Vicinity Map

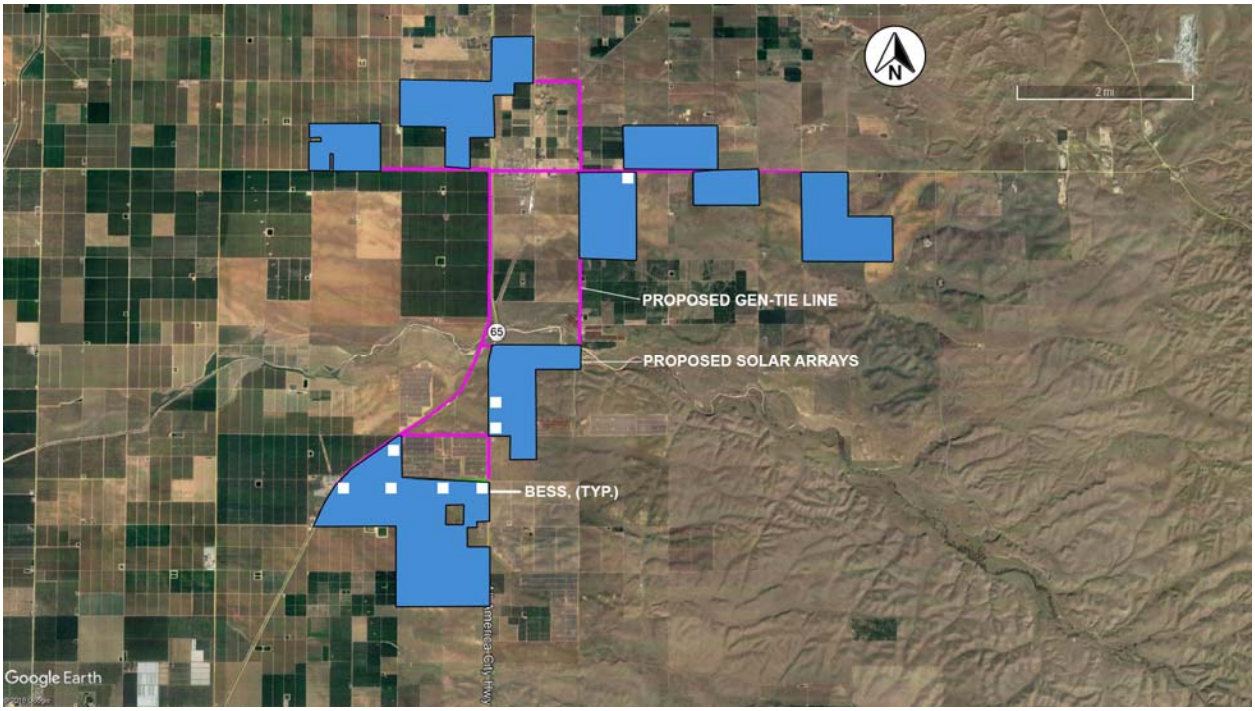

Fig 2 – Project Location Map

The visual impact has been evaluated by creating 3D render images. The simulated scenarios recreate the future landscape after the plant will be built. Seven key observation points (KOPs) were selected for rendering. Those locations are presented in Figure 3.

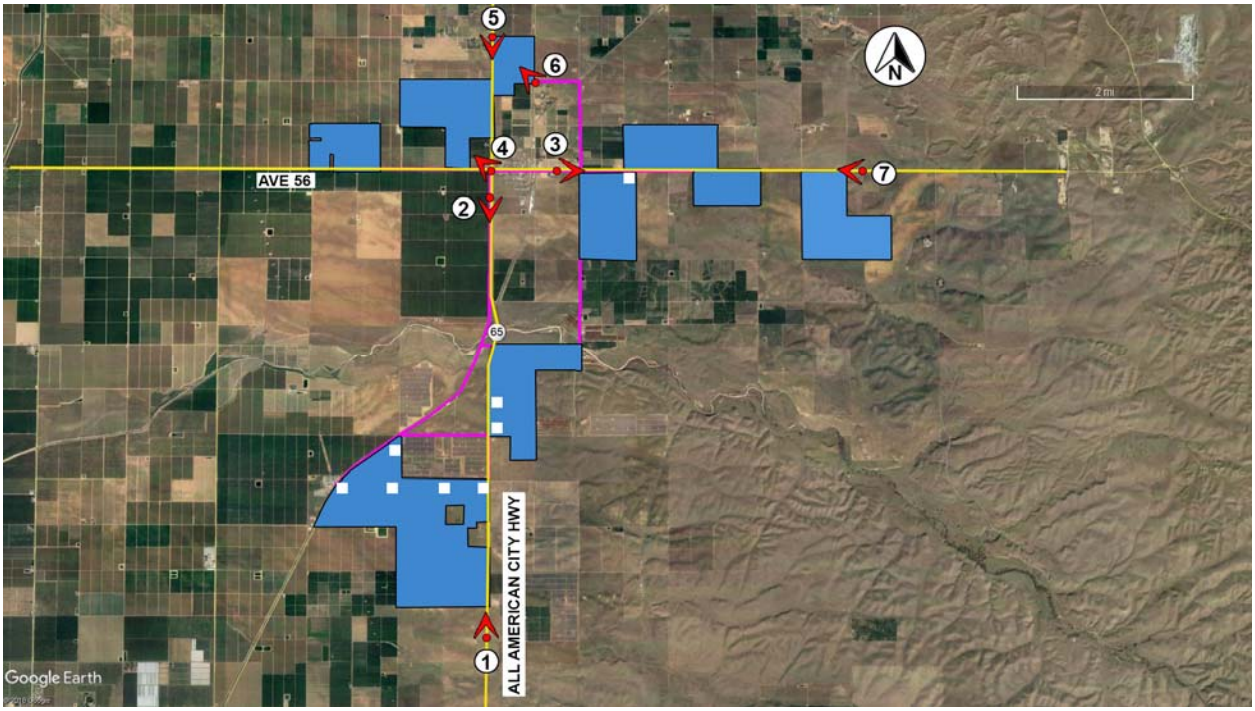

Fig 3 – Key Observation Points Map

For the simulations, single axis tracker blocks have been considered. Light colored palliatives may be employed on the project site as well. Each skid inverter block would have approximately 150 tracker rows. Each tracker row would be composed of around 90 polycrystalline modules with a maximum height of approximately 8-feet, as shown in Figure 4, Approximate Tracker Dimensions.

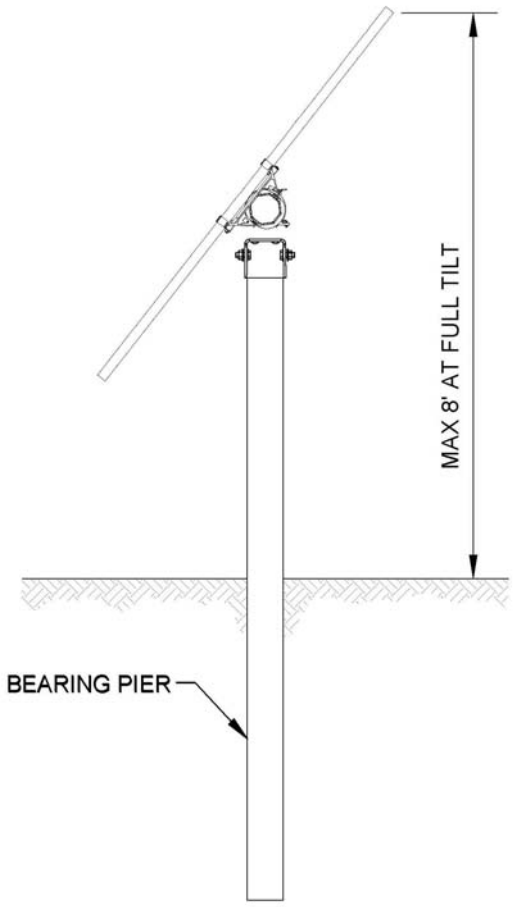

Fig 4 – Approximate Tracker Dimensions

The distance between trackers has been optimized in order to minimize the shading with an optimum usage of the land.

Operations and maintenance facilities, together with substation, battery storage containers and transmission facilities have been included in order to show the visual impact of those permanent buildings for the project's life. Final design and location/route may be revised prior to issuance of permits.

The following image shows the aerial view of the completed project.

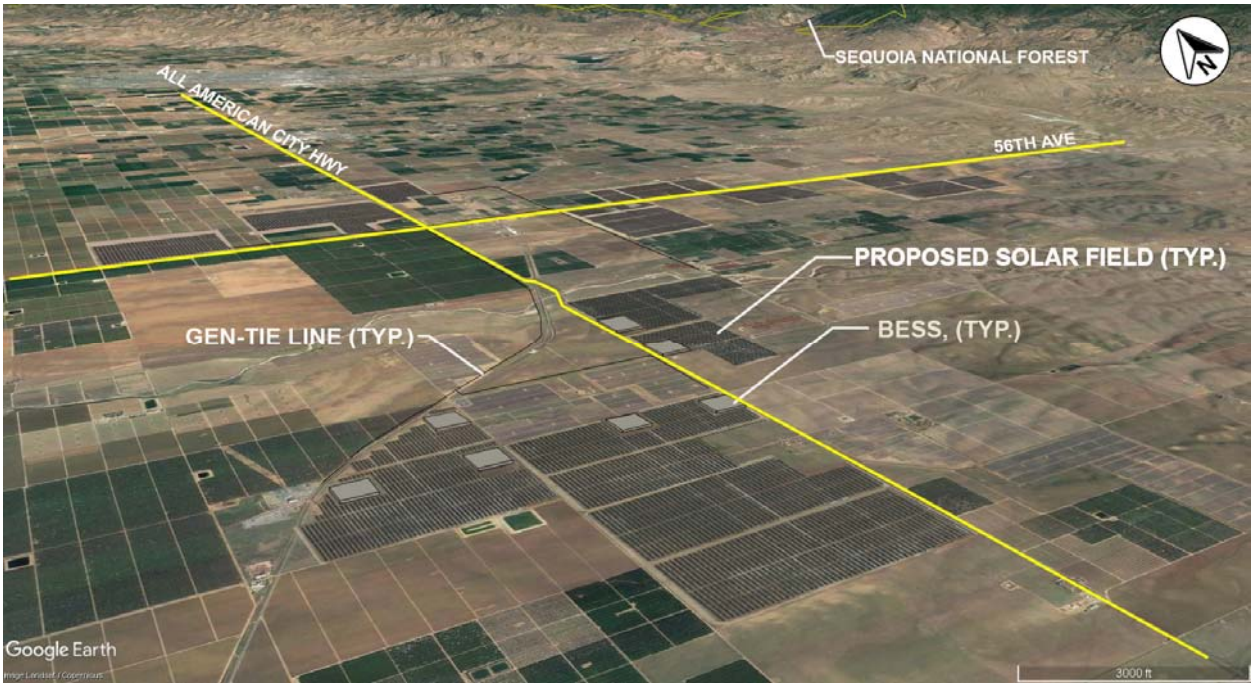

Fig 5 – Post-Construction Image looking Northeast

2 KOP Photo Renderings

Fig 6 – KOP #1, before construction

Fig 7 – KOP #1, after construction

Fig 8 – KOP #2, before construction

Fig 9 – KOP #2, after construction

Fig 10 – KOP #3, before construction

Fig 11 – KOP #3, after construction

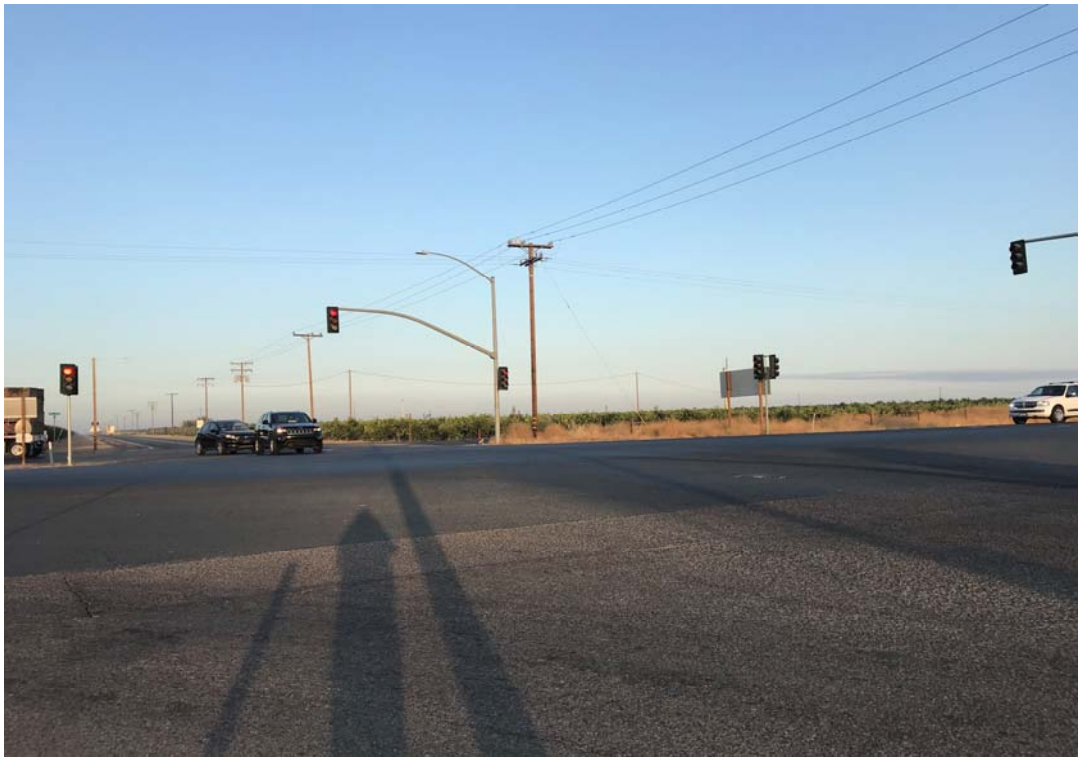

Fig 12 – KOP #4, before construction

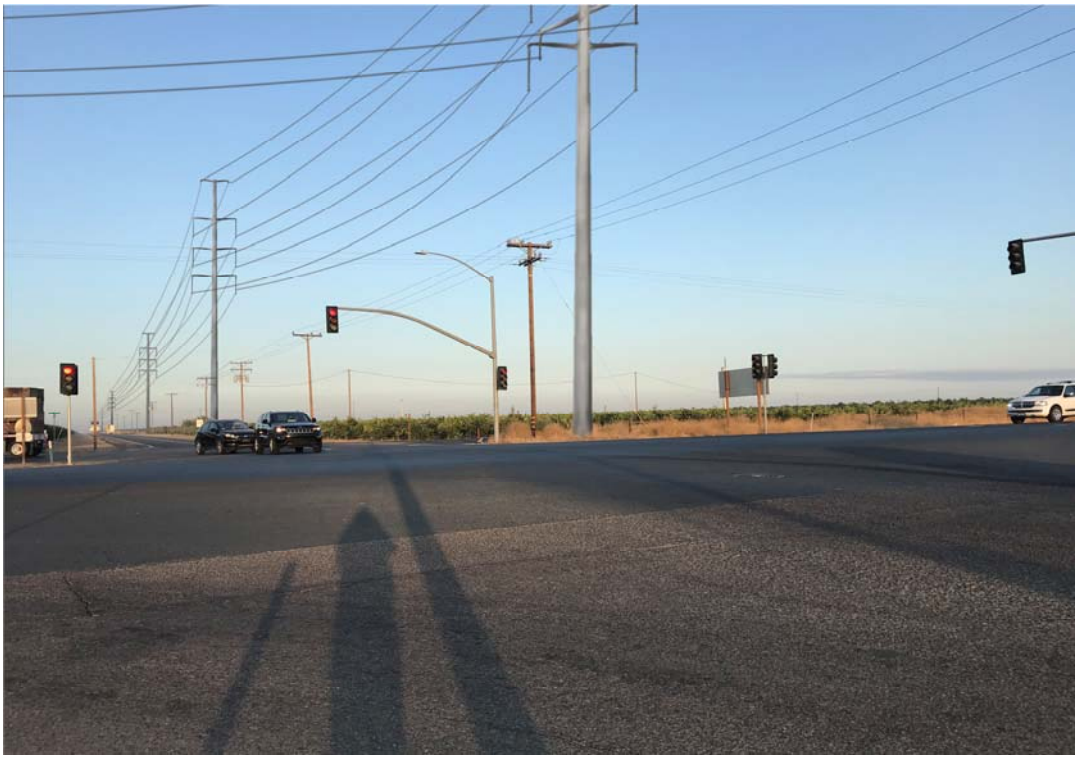

Fig 13 – KOP #4, after construction

Fig 14 – KOP #5, before construction

Fig 15 – KOP #5, after construction

Fig 16 – KOP #6, before construction

Fig 17 – KOP #6, after construction

Fig 18 – KOP #7, before construction

Fig 19 – KOP #7, after construction

APPENDIX B

TULARE COUNTY BOARD OF SUPERVISORS ADOPTED RESOLUTIONS, AGRICULTURAL ZONE LAND USES

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF ESTABLISHING CRITERIA FOR PUBLIC AND PRIVATE UTILITY STRUCTURES PROPOSED ON AGRICULTURAL ZONED LANDS AND LANDS UNDER WILLIAMSON ACT CONTRACTS) **RESOLUTION NO. 2010-0717**

UPON MOTION OF SUPERVISOR ISHIDA, SECONDED BY SUPERVISOR ENNIS, THE FOLLOWING WAS ADOPTED BY THE BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD AUGUST 31, 2010, BY THE FOLLOWING VOTE:

AYES: SUPERVISORS ISHIDA, VANDER POEL, WORTHLEY AND ENNIS
NOES: SUPERVISOR COX
ABSTAIN: NONE
ABSENT: NONE

ATTEST: JEAN M. ROUSSEAU
COUNTY ADMINISTRATIVE OFFICER/
CLERK, BOARD OF SUPERVISORS

BY: Dennis A. YBarra
Deputy Clerk

* *

1. Received recommendations of the Agricultural Advisory Committee and Planning Commission.

2. Adopted Criteria for Public and Private Utility Structures located on Agricultural Zoned Lands and lands under Williamson Act Contracts.

   Level I: Agricultural Zoned Lands.

   a.) Not necessarily support the public and private utility structures on prime farmlands as defined by the State Farmland Mapping and Monitoring Program (FMMP).

   b.) Analyze the coverage of the proposed public and private utility structures on the agricultural zoned lands and their operations.

c.) Public and private utility structures on non-prime farmlands may be permitted subject to findings and conditions.

d.) Require developer agreements that include cost recovery, loss of crop production and/or subvention funds, removal of facility and reclamation requirements, and other Tulare County financial incentives.

e.) Desired locations to be in proximity to the electrical grid/corridor/electrical substation.

f.) Water readily availability analysis for agricultural operations. Surface, well, irrigation canal, transfer of water to another site.

g.) CEQA findings – Temporary Use – Loss of Agricultural production or operations.

h.) Rural Valley Lands Plan analysis does not apply.

Level II: Agricultural Zoned Lands under Williamson Act Contracts.

a.) All criteria noted above in Level I to be completed.

b.) Review Resolution No. 89-1275 – Uniform Rules for Agricultural Preserves and Resolution No. 99-0620 establishing Rules for Farmland Security Zones to insure compatibility.

c.) Review Williamson Act Contract Contents to insure compatibility.

RMA
TCRMA –Flood/Subdivisions/Surveyor/Permits Division
TCRMA – Building Division
TCHHSA – Environmental Health Services Division
TCRMA – Airport Land Use Commission
TCRMA – Countywide Planning Division
TC Fire Department
TCRMA – Solid Waste Division
TCRMA – Agricultural Commissioner
TCFB – Tulare County Farm Bureau
TCAAC – Tulare County Agricultural Advisory Committee

DAY
8/31/10

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF COMPATIBILITY FOR PUBLIC AND PRIVATE UTILITY STRUCTURES) LOCATED ON AGRICULTURAL ZONED LANDS AND LANDS UNDER WILLIAMSON ACT CONTRACTS

RESOLUTION NO. 2010-0591

UPON MOTION OF SUPERVISOR COX, SECONDED BY SUPERVISOR VANDER POEL, THE FOLLOWING WAS ADOPTED BY THE BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD JULY 13, 2010, BY THE FOLLOWING VOTE:

AYES: SUPERVISORS ISHIDA, VANDER POEL, COX AND ENNIS
NOES: NONE
ABSTAIN: NONE
ABSENT: SUPERVISOR WORTHLEY

ATTEST: JEAN M. ROUSSEAU
COUNTY ADMINISTRATIVE OFFICER/
CLERK, BOARD OF SUPERVISORS

BY: Denise A. Ybarra
Deputy Clerk

1. Received Staff Report, Presentation and Directed Staff to prepare criteria considerations for Public and Private Utility Structures located on Agricultural Zoned Lands and refer to Agricultural Advisory Committee and Planning Commission for recommendation to the Board.

2. Accepted the two tier process concept for public and private utility applications on agricultural zoned lands.

   First level of review. Where public and private utility structures are located on non Williamson Act contracted lands subject to a Special Use Permit and Developer Agreement.

   Second level of review. Where public and private utility structures are located on Williamson Act Contracted lands subject to a Special Use Permit, and Developer Agreement and findings of compatibility.

RMA

DAY
7/14/10

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF AMENDMENT TO RESOLUTION INTERPRETATION TO TULARE COUNTY ZONING ORDINANCE NO. 352	))))	RESOLUTION NO. 2010-0590

UPON MOTION OF SUPERVISOR ISHIDA, SECONDED BY SUPERVISOR VANDER POEL, THE FOLLOWING WAS ADOPTED BY THE BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD JULY 13, 2010, BY THE FOLLOWING VOTE:

AYES:	SUPERVISORS ISHIDA, VANDER POEL, COX AND ENNIS
NOES:	NONE
ABSTAIN:	NONE
ABSENT:	SUPERVISOR WORTHLEY

ATTEST: JEAN M. ROUSSEAU
COUNTY ADMINISTRATIVE OFFICER
CLERK, BOARD OF SUPERVISORS

BY: Denise A. Ybarra
Deputy Clerk

Amended Resolution No. 2010-0458 to include Agricultural Zone Districts in the Solar and Wind Electrical Generation Facilities of Tulare County Zoning Ordinance No. 352.

RMA
Ag. Advisory Comm.

DAY
7/14/10

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF INTERPRETATION TO THE TULARE COUNTY ZONING ORDINANCE NO. 352 FOR SOLAR AND WIND ELECTRICAL GENERATION FACILITIES, COUNTY WIDE	)))))	**RESOLUTION NO. 2010-0458**

UPON MOTION OF SUPERVISOR COX, SECONDED BY SUPERVISOR ENNIS, THE FOLLOWING WAS ADOPTED BY THE BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD JUNE 8, 2010, BY THE FOLLOWING VOTE:

AYES: SUPERVISORS ISHIDA, VANDER POEL, COX, WORTHLEY AND ENNIS
NOES: NONE
ABSTAIN: NONE
ABSENT: NONE

ATTEST: JEAN M. ROUSSEAU
COUNTY ADMINISTRATIVE OFFICER
CLERK, BOARD OF SUPERVISORS

BY: Denise A. Ybarra
Deputy Clerk

1. Adopted zoning interpretation that Solar and Wind Electrical Generation Facilities are included within the meaning of Public and Private Utility Structures and that said facilities, where a Special Use Permit is required, shall be subject to a Development Agreement. Agricultural Zone Districts are excluded from this interpretation.
2. Accepted the Resource Management Agency's three tier processing for Public and Private Utility applications:
   Tier 1. Where a solar or wind electrical generating facility is designed for on-site consumption, the facility shall be considered an accessory use and permitted by right.
   Tier 2. Where a solar and wind electrical generating facility is designed for on-site consumption and excess generation is for sale, the use shall be subject to a Special Use Permit and Development Agreement.
   Tier 3. Where a solar and wind electrical generating facility is designed for sale, the use shall be subject to a Special Use Permit and Development Agreement.

RMA
Fire
Ag. Comm.

DAY
6/09/10

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA
AND WIND ELECTRICAL GENERATION
FACILITIES, COUNTY WIDE
IN THE MATTER OF INTERPRETATION
TO THE TULARE COUNTY ZONING
ORDINANCE NO. 352 FOR SOLAR RESOLUTION NO. 2010-0458
UPON MOTION OF SUPERVISOR COX, SECONDED BY SUPERVISOR
ENNIS, THE FOLLOWING WAS ADOPTED BY THE BOARD OF SUPERVISORS, AT
AN OFFICIAL MEETING HELD JUNE 8, 2010, BY THE FOLLOWING VOTE:
AYES:
NOES:
ABSTAIN:
ABSENT:
SUPERVISORS ISHIDA, VANDER POEL, COX, WORTHLEY
AND ENNIS
NONE
NONE
NONE
ATTEST: JEAN M. ROUSSEAU
COUNTY ADMINISTRATIVE OFFICER
CI,ZRK, BOARD OF SUPERVISORS
BY:
Deputy le
opted zoning interpretation that Solar and Wind Electrical Generation Facilities are included within the meaning of Public and Private Utility Structures and that said facilities, where a Special Use Permit is required, shall be subject to a Development Agreement. Agricultural Zone Districts are excluded from this interpretation.
2. Accepted the Resource Management Agency's three tier processing for Public and Private Utility applications:
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Tier 2. Where a solar and wind electrical generating facility is designed for on-site consumption and excess generation is for sale, the use shall be subject to a Special Use Permit and Development Agreement.
Tier 3. Where a solar and wind electrical generating facility is designed for sale, the use shall be subject to a Special Use Permit and Development Agreement.
RMA
Fire
Ag. Comm.
DAY

RESOURCE MANAGEMENT AGENCY
COUNTY OF TULARE
AGENDA ITEM

AGENDA DATE: June 8, 2010 – **REVISED**

Public Hearing Required	Yes ☐	No ☒	N/A ☐
Scheduled Public Hearing w/Clerk	Yes ☐	No ☒	N/A ☐
Published Notice Required	Yes ☐	No ☒	N/A ☐
Advertised Published Notice	Yes ☐	No ☒	N/A ☐
Meet & Confer Required	Yes ☐	No ☒	N/A ☐
Electronic file(s) has been sent	Yes ☒	No ☐	N/A ☐
Budget Transfer (Aud 308) attached	Yes ☐	No ☐	N/A ☒
Personnel Resolution attached	Yes ☐	No ☐	N/A ☒
Resolution, Ordinance or Agreements are attached and signature line for Chairman is marked with tab(s)/flag(s)	Yes ☒	No ☐	N/A ☐

CONTACT PERSON: Celeste Perez PHONE: (559) 624-7000

SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide

REQUEST(S):

That the Board of Supervisors:

1. Adopt zoning interpretation that Solar and Wind Electrical Generation Facilities are included within the meaning of Public and Private Utility Structures and that said facilities, where a Special Use Permit is required, shall be subject to a Development Agreement.
2. Accept the Resource Management Agency's three tier processing for Public and Private Utility applications:
   Tier 1. Where a solar or wind electrical generating facility is designed for on-site consumption, the facility shall be considered an accessory use and permitted by right.
   Tier 2. Where a solar and wind electrical generating facility is designed for on-site consumption and excess generation is for sale, the use shall be subject to a Special Use Permit and Development Agreement.
   Tier 3. Where a solar and wind electrical generating facility is designed for sale, the use shall be subject to a Special Use Permit and Development Agreement.

SUMMARY:

The proposed zoning interpretation would permit solar and wind electrical

BOARD OF SUPERVISORS
RESOURCE MANAGEMENT
AGENCY
COUNTY OF TULARE
AGENDA ITEM
ALLEN ISHIDA
District One
PETE VANDER POEL
District Two
PHILLIP A. COX
District Three
J. STEVEN WORTHLEY
District Four
MIKE ENNIS
District Five
AGENDA DATE: June 8, 2010 REVISED
Public Hearing Required Yes No Z N/A
Scheduled Public Hearing w/Clerk Yes No Z N/A
Published Notice Required Yes No Z N/A
Advertised Published Notice Yes No Z N/A
Meet & Confer Required Yes No Z N/A
Electronic file(s) has been sent Yes Z No N/A
Budget Transfer Aud 308) attached Yes No N/A Z
Personnel Resolution attached Yes No N/A Z
Resolution, Ordinance or Agreements are attached and signature line for Chairman is marked with tab(s)/flag(s) Yes Z No N/A
CONTACT PERSON: Celeste Perez PHONE: 559) 624-7000
SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide
REQUEST(S):
That the Board of Supervisors:
1. Adopt zoning interpretation that Solar and Wind Electrical Generation Facilities are included within the meaning of Public and Private Utility Structures and that said facilities, where a Special Use Permit is required, shall be subject to a Development Agreement.
2. Accept the Resource Management Agency's three tier processing for Public and Private Utility applications:
Tier 1. Where a solar or wind electrical generating facility is designed for on-site consumption, the facility shall be considered an accessory use and permitted by right.
Tier 2. Where a solar and wind electrical generating facility is designed for on-site consumption and excess generation is for sale, the use shall be

subject to a Special Use Permit and Development Agreement.
Tier 3. Where a solar and wind electrical generating facility is designed for sale, the use shall be subject to a Special Use Permit and Development Agreement.
SUMMARY:
The proposed zoning interpretation would permit solar and wind electrical

generation facilities in all zone districts permitting Public and Private Utility Facilities Public Utility Structures subject to a Special Use Permit and Development Agreement. Exceptions to this requirement include: (1) Public Utility Facilities preempted by State and/or Federal Law; and (2) A Public Utility Facility designed and used for on-site consumption.

The research conducted by Resource Management Agency (RMA) staff in support of the zoning interpretation is contained in Exhibit A. In summary 23, Zone Districts permit Public Utility Structures by Special Use Permit. The existing General Plan and the Draft General Plan contain Goals and Policies Supporting alternative energy programs. The State of California Solar Initiative and Funding encourages the use of alternative energy facilities. The approval of the requested zoning interpretation would expand the definition of Public Utility Structures to include solar and wind facilities.

Resource Management Agency has 11 Special Use Permit Applications for Solar facilities filed which are being processed on the assumption that such use is a Public Utility Facility as defined by Tulare County Zoning Code.

ZONING INTERPRETATION AND APPLICATION:

RMA Planning staff has responded to the requested Special Use Permit Applications for Solar electrical generation facilities and has engaged both the Tulare County Farm Bureau and Tulare County Agricultural Advisory Committee regarding these electrical generation facilities being located on agricultural lands. The State of California Department of Conservation has produced an opinion paper relating to the placement of Public Utility Facilities on Williamson Act Contracted lands.

The proposed entitlement process is three tiered:

Tier 1. Where a solar or wind electrical generating facility is designed for on-site consumption, the facility shall be considered an accessory use and permitted by right.
Tier 2. Where a solar and wind electrical generating facility is designed for on-site consumption and excess generation is for sale, the use shall be subject to a Special Use Permit and Development Agreement.
Tier 3. Where a solar and wind electrical generating facility is designed for sale, the use shall be subject to a Special Use Permit and Development Agreement.

Note: Application of this zoning interpretation is further expanded and defined in a separate action when such Public Utility Facility is proposed to be located on prime or non-prime agricultural lands as well as lands under Williamson Act Contracts or Farmland Security Zones.

SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide
DATE: June 8, 2010
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The research conducted by Resource Management Agency RMA) staff in support of the zoning interpretation is contained in Exhibit A. In summary 23, Zone Districts permit Public Utility Structures by Special Use Permit. The existing General Plan and the Draft General Plan contain Goals and Policies Supporting alternative energy programs. The State of California Solar Initiative and Funding encourages the use of alternative energy facilities. The approval of the requested zoning interpretation would expand the definition of Public Utility Structures to include solar and wind facilities.
Resource Management Agency has 11 Special Use Permit Applications for Solar facilities filed which are being processed on the assumption that such use is a Public Utility Facility as defined by Tulare County Zoning Code.
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RMA Planning staff has responded to the requested Special Use Permit Applications for Solar electrical generation facilities and has engaged both the Tulare County Farm Bureau and Tulare County Agricultural Advisory Committee regarding these electrical generation facilities being located on agricultural lands. The State of California Department of Conservation has produced an opinion paper relating to the placement of Public Utility Facilities on Williamson Act Contracted lands.
The proposed entitlement process is three tiered:
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Note: Application of this zoning interpretation is further expanded and defined in a separate action when such Public Utility Facility is proposed to be located on prime or non-prime agricultural lands as well as lands under Williamson Act Contracts or Farmland Security Zones.
2

SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide

DATE: June 8, 2010

FISCAL IMPACT/FINANCING:

Initial costs associated with the processing of these Special Use Permits are paid by the applicant in the form of a $1,750 deposit. Subsequent costs, including staff time, are billed at the rate of $100 per hour.

LINKAGE TO THE COUNTY OF TULARE STRATEGIC BUSINESS PLAN:

The interpretation that solar and wind electrical generation facilities are included within the meaning of Public and Private Utility Structures aligns with the Economic Well-Being and Quality of Life initiatives by providing economic development opportunities and promoting natural resource management and the continued improvement of environmental quality.

ALTERNATIVES:

1. Find that solar and wind electrical generation facilities not be included as a Public and Private Utility Structures.
2. Table the item and send back to staff for additional research and direct RMA Staff to stop the processing of Special Use Permit Applications for Solar Facilities.

INVOLVEMENT OF OTHER DEPARTMENTS OR AGENCIES:

The Resource Management Agency Planning Branch referred the current batch of Special Use Permits for solar facilities to the follow departments and agencies for early comment:

TCRMA –Flood/Subdivisions/Surveyor/Permits Division
TCRMA – Building Division
TCHHSA – Environmental Health Services Division
TCRMA – Airport Land Use Commission
TCRMA – Countywide Planning Division
TC Fire Department
TCRMA – Solid Waste Division
TCRMA – Agricultural Commissioner
TCFB – Tulare County Farm Bureau
TCAAC – Tulare County Agricultural Advisory Committee
School Districts
Caltrans – District 6
Regional Water Quality Control Board District 5.
District Archaeologist
Department of Fish and Game
San Joaquin Valley Air Pollution Control District
Edison International
Southern California Gas Company

SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide
DATE: June 8, 2010
FISCAL IMPACT/FINANCING:
Initial costs associated with the processing of these Special Use Permits are paid by the applicant in the form of a $1,750 deposit. Subsequent costs, including staff time, are billed at the rate of $100 per hour.
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ALTERNATIVES:
1. Find that solar and wind electrical generation facilities not be included as a Public and Private Utility Structures.
2. Table the item and send back to staff for additional research and direct RMA Staff to stop the processing of Special Use Permit Applications for Solar Facilities.
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District Archaeologist
Department of Fish and Game
San Joaquin Valley Air Pollution Control District
Edison International
Southern California Gas Company
3

SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide

DATE: June 8, 2010

ADMINISTRATIVE SIGN-OFF:

_____

Jake Raper, Jr., AICP
RMA Director

cc: Auditor/Controller
County Counsel
County Administrative Office (2)

Attachment(s)

Exhibit A – Supporting Research and Analysis for zoning Interpretation
Attachment 1 – Solar facility locations General Zoning Map

SUBJECT: Interpretation to the Tulare County Zoning Ordinance No. 352 for Solar and Wind Electrical Generation Facilities, County Wide
DATE: June 8, 2010
ADMINISTRATIVE SIGN-OFF:
Jake Raper, Jr., AICP
RMA Director
cc: Auditor/Controller
County Counsel
County Administrative Office 2)
Attachment(s)
Exhibit A Supporting Research and Analysis for zoning Interpretation
Attachment 1 Solar facility locations General Zoning Map
4

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF)
ESTABLISHING RULES FOR) RESOLUTION NO. 99-0620
FARMLAND SECURITY ZONES)

WHEREAS, California Senate Bill 1182 (Chapter 353, Statutes of 1998) added Section 51296 to the Williamson Act, authorizing counties to establish Farmland Security Zones and execute contracts to restrict the use of agricultural lands; and

WHEREAS, on July 13, 1999 (by Resolution No. 99-0479), the Board of Supervisors established procedures for initiating, filing, and processing requests to establish Farmland Security Zones in Tulare County; and

WHEREAS, this Board wishes to establish rules for agricultural and compatible uses allowed in Farmland Security Zones.

NOW, THEREFORE, BE IT RESOLVED as follows:

A. The Board of Supervisors of the County of Tulare does hereby determine that the following uses are considered to be consistent with the intent of Senate Bill 1182 as set forth in Section 51296 of the California Government Code, and which may be carried on within any Farmland Security Zone:

RMA
Co.Cnsl.
Assessor
Auditor
CAO
PN 12904
3/24/99
c

Commercial Agricultural Uses

1. The growing and harvesting of fruit and nut trees, vines, vegetables, horticultural specialties, and timber.
2. The growing and harvesting of field crops including but not limited to grain and hay crops, floral crops, seed crops, fiber crops, and sod or forage.
3. The raising and slaughter of poultry and ratites, except when a Use Permit is required under No. 10 hereinbelow.

4. The raising and slaughter of rabbits and other similar fur-bearing animals, except when a Use Permit is required under No. 10 hereinbelow.

5. The raising of sheep, goats, horses, mules, swine, bovine animals and other similar domesticated quadrupeds, except when a Use Permit is required under No. 10 hereinbelow.

6. Aquaculture/fish farming operations for the raising as a crop but not including fishing clubs or fishing for members of the general public on a commercial basis.

7. Insecticulture and vermiculture.

8. Apiary and honey extraction plant.

9. Plant nursery, not including retail sales.

10. Commercial agricultural uses that are permitted after Special Use Permit approval (as per Ordinance 352, as amended), as follows:

    a. Mushroom growing.

    b. Feedlot for more than twenty-five (25) animals.

    c. Raising and slaughter of poultry based on the density or numbers of poultry set forth in the Zoning Ordinance.

    d. Raising and slaughter of ratites based on the density or numbers of ratites set forth in the Zoning Ordinance.

    e. Raising and slaughter of rabbits or other fur-bearing animals based on the density or numbers of animals set forth in the Zoning Ordinance.

    f. Raising of sheep, goats, horses, mules, swine, bovine animals or other similar domesticated quadrupeds based on the density or numbers of animals set forth in the Zoning Ordinance.

    g. Dairy (when more than 25 milking cows are on the property at any time).

B. The Board of Supervisors of the County of Tulare does hereby determine that the following uses are considered to be permitted as 'Compatible' Agricultural Uses, provided they are determined, on an individual case-by-case basis, to be consistent with the principles of compatibility set forth in Government Code Section 51238.1 (a) and (b):

Compatible Uses

1. Open space uses including, but not limited to, a scenic highway corridor, wildlife habitat area, salt pond, managed wetland area, or a submerged area, as defined as agricultural land by the Land Conservation Act of 1965, as amended.
2. Biomass fuel manufacture for personal use. Biomass fuel manufacture for commercial use shall also be permitted if incidental or accessory to the agricultural use of the site and if a use permit is approved.
3. The storage and/or handling of agricultural chemicals for on-farm, non-commercial use only.
4. Sale of agricultural products, including sale at roadside stands and from vehicles, if all of the agricultural products offered for sale at any time have been produced on the property where the sale is conducted or on other property owned, leased or operated by the same person who owns, leases or operates the property where the sale is conducted. As used in this paragraph, 'agricultural products' mean commodities produced for the purpose of food, fuel, and fiber, and also include feed for livestock and fowl and trees and plants grown for ornamental use, such as Christmas trees, but not a retail plant nursery.
5. Temporary landing of aircraft engaged in agricultural uses and the landing and storage of the property owner's aircraft that is used as part of said owner's agricultural operations.
6. One (1) single-family residence or mobilehome for the entire contiguous property owned by one (1) person, firm, partnership or corporation or owned jointly by more than one (1) person, firm, partnership, or corporation or any combination thereof. Such residence or mobilehome shall be occupied only by an owner of the property and his family or a lessee of the property and his family.
7. In addition to the residence allowed under paragraph 6 above, one (1) additional residence or mobilehome for each forty (40) acres in the entire

property. Such additional residences and mobilehomes shall be occupied only by relatives of the owner or lessee, by farmworkers, or by employees who work on the property and their families, provided that the total number of farmworkers and/or employees shall not exceed twelve (12) at any time without Special Use Permit approval. However, if the property is less than forty (40) acres in area and was of record at the time the Farmland Security Zone became applicable to the property, one (1) such residence or mobile-home may be constructed and used as a dwelling by the persons designated hereinabove. This paragraph shall not be interpreted to require the removal of any residence or mobilehome existing at the time the Farmland Security Zone became applicable to the property and which does not meet the density standards herein established provided that the residence or mobilehome is occupied by the persons designated herein and was established in accordance with all applicable building and zoning regulations.

8. Incidental and accessory structures and uses including barns, stables, coops, tank houses, storage tanks, wind machines, windmills, silos, and other farm buildings, private garages and carports, storehouses, garden structures, greenhouses, recreation rooms, storage and use of petroleum products, and kennels for private, noncommercial use.

9. Signs that pertain only to a permitted use on the property on which the the sign is situated or that pertain to the sale, lease, or rental of property or a structure or personal property located on the property. In addition, signs which are no larger than four (4) square feet in area and which pertain to producer and marketing associations and organizations with which the owner or lessee is affiliated are allowed.

10. Compatible agricultural uses that are permitted after Special Use Permit approval (as per Ordinance 352, as amended), as follows:

    a. Agricultural chemical experiment stations.

    b. Establishments for the curing, processing, packaging, packing, storage, and shipping of agricultural products, provided that all of said

agricultural products are grown on the same property or on other property owned, leased, or operated by the same person who owns, leases, or operates the property where the establishment is located. Such establishments include, but are not limited to, the following: Agricultural dehydrators; Feed mills; Fish smoking, curing, and canning; Olive and/or olive oil processing; and Wineries.

c. Agricultural service establishments primarily engaged in performing agricultural animal husbandry services or horticultural services to farmers and performing services to farmers or farm-related activities such as planting, harvesting, storage, hauling, and equipment repair and maintenance -- provided that such services performed are clearly incidental and secondary to the use of property for bona fide agricultural /farming purposes and don't change the agricultural character of the area thereof, that the agricultural service use (including any associated structures and/or outside storage areas) occupies no more than ten percent of the total area of the unit or contiguous units of property owned or leased by the operator (but not to exceed ten acres), that no sales of equipment or products is conducted on the premises as part of the operation, and that equipment used in the service is the same as that used as part of farming operations on the property.

d. Retail plant nursery incidental to a wholesale nursery, consisting of the retail sales of trees, shrubs, vines, flowers, or grasses propagated for transplanting or for use as stock for grafting as part of a whole-sale plant nursery operation, provided that the area dedicated to retail sales of non-plant stock accessory items necessary for propagation and grafting may be allowed in an area up to five (5) percent of the total square footage of the retail nursery site area.

e. Biomass fuel manufacture for commercial use which is incidental to or accessory to bona fide agricultural use of a site.

f. Farmworker Housing for more than 12 farmworkers and/or where the farmworker housing consists of manufactured homes, mobilehomes, or recreation vehicles.

g. The erection, construction, alteration or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities, provided that insofar as such facilities require a Special Use Permit under the provisions of Ordinance 352, as presently in effect and as said provisions may be amended from time to time, and may be carried on when such Special Use Permit has been secured.

h. The installation and operation of asphalt batching plants and concrete batching plants on a temporary basis for producing asphalt or concrete to be used only for construction or repair of a road, building, or other project for the State, County, or political subdivision of the State. Such a batching plant may be placed within the FSZ or Agricultural Preserve upon the commencement of such a public project, and immediately after all asphalt or concrete work required for the project has been completed, the batching plant shall be completely removed from the Zone or Preserve, and the premises shall be restored to the conditions existing prior to the installation of the batching plant. No asphalt or concrete shall be produced by such a batching plant for sale to the general public or for any purposes whatsoever other than the construction of the public project which it is supplying.

C. Any uses specifically permitted by the Williamson Act, as amended from time to time, shall be allowed in Farmland Security Zones.

D. Because of the many factors which must be considered when issuing Special Use Permits, nothing in Sections A or B above shall be construed to obligate this Board to issue such a permit if one should be applied for in the future.

E. If the owner of the property within an agricultural preserve enters into a Farmland Security Zone contract pursuant to the Williamson Act, such property shall not be used for any purpose other than those which are authorized by these Rules.

F. All real property, improved and/or unimproved, which is shown on the latest adopted tax roll as a unit or as contiguous units and which is owned by the same person or persons, shall not be divided for the purpose of sale, lease, or financing after a Farmland Security Zone contract has been entered into between the owner or owners and the County except in compliance with this paragraph; and any such division of land which is not in compliance with this paragraph shall constitute an incompatible use. If the property is zoned AE-10, AE-20, AE-40, or AE-80, then such divisions of land may be made in conformity with the provisions of Tulare County Ordinance No. 352, as presently in effect and as said Ordinance may be amended from time to time, applicable to the specific zone in which said property is located, except that Section 15.D.2 of said Ordinance No. 352 shall not be applicable.

THE FOREGOING RESOLUTION was approved upon motion of Supervisor Sanders, seconded by Supervisor Worthley, at a regular meeting of the Board of Supervisors held on the 17th day of August, 1999, by the following vote:

AYES: Sanders, Richmond, Maze, Worthley, Maples
NOES: None
ABSTAIN: None
ABSENT: None

ATTEST: THOMAS F. CAMPANELLA
COUNTY ADMINISTRATIVE OFFICER/
CLERK, BOARD OF SUPERVISORS

BY Janice Cotton
Deputy Clerk

BOARD OF SUPERVISORS * TULARE COUNTY, CAL. *

* * * *

Mr. Scott Kuney
Young Wooldridge
1800 30th Street, 4th Floor
Bakersfield, CA 93301

Christopher Campbell
Baker Manock & Jenson
5260 North Palm Avenue, Fourth Floor
Fresno, CA 93704

Richard Moss
Provost & Prichard
130 N Garden Street
Visalia, CA 93291

Mike Wyant
mwyant@californiadaires.com

Ralph Friend
Ralph@rfriend.net

Daryl Maas
daryl@maasenergy.com

Lyle Schlyer
LSchlyer@calgren.com

Pixley Town Council

BEFORE THE BOARD OF SUPERVISORS

COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF ADOPTION OF UNIFORM RULES FOR AGRICULTURAL PRESERVES) RESOLUTION NO. 89-1275

Upon the motion of Supervisor Gould, seconded by Supervisor Reed, the following Resolution was made, passed and adopted:

A. The Board of Supervisors of the County of Tulare does hereby determine that all of the following uses are either agricultural uses which are allowed under the Williamson Act, or are compatible with said agricultural uses as defined in Section 51201 of the Government Code, and may be carried on within the Preserve:

1. Permitted uses as follows:

a. The growing and harvesting of field crops, fruit and nut trees, vines, vegetables, horticulture specialties, and timber.

b. The operation of apiaries and honey extraction plants.

c. The operation of a dairy so long as no more than twenty-five (25) cows are on the property at any time.

d. The raising and slaughter of poultry, rabbits and other fur-bearing animals, except when a Use Permit is required under paragraph 4 hereinbelow.

e. The raising and slaughter of sheep, goats, horses, mules, swine, bovine animals, and other similar domesticated quadrupeds, except when a Use Permit is required under paragraph 4 hereinbelow.

f. Feedlot for twenty-five animals or less.

g. Agricultural service establishments primarily engaged in performing agricultural husbandry services or horticultural services to farmers.

h. Services to farmers or farm-related activities in planting, harvesting, storage, hauling, and equipment repair and maintenance.

i. Incidental and accessory structures and uses including barns, stables, coops, tank houses, storage tanks, windmachines, windmills, silos and other farm buildings, private garages and carports, guest houses, storehouses, garden structures, greenhouses, recreation rooms, and the storage of petroleum products.

j. Mobilehomes and residences for the owners and lessees of the property, and for housing farm employees who work on the property.

k. Mobilehomes and residences for use by non-paying guests of the owners or lessees of the property.

l. Any residence which is in existence on the date that the Williamson Act Contract is entered into may be rented or leased to persons even though they are not the owners or lessees of the agricultural property which is subject to the Contract and are not farm employees who work on such property, and there shall be no minimum acreage on the amount of property to be rented or leased with such residence. This subparagraph shall not apply to any residence that is constructed after the date that the Williamson Act Contract is entered into and it shall not be a compatible use to rent or lease such residences pursuant to this paragraph.

m. Plant nurseries.

n. Sale of agricultural products and feed for livestock and fowl, including sale at roadside stands, if more than

one-half (1/2) of the value of the products on hand for sale at any time has been produced on the property where the sale is conducted or other property owned by the same person.

o. Signs which pertain only to a permitted use on the property on which the sign is situated or which pertains to the sale, lease or rental of the property or a structure or personal property located on the property. In addition, signs which are no larger than four (4) square feet in area and which pertain to production and marketing associations and organizations with which the owner or lessee is affiliated, are allowed.

p. Temporary landing of helicopters engaged in agricultural uses.

q. The curing, processing, packaging, packing, storage and shipping of agricultural products.

r. The installation and operation of asphalt batching plants and concrete batching plants on a temporary basis for producing asphalt or concrete to be used only for construction or repair of a road, building, or other project for the State, County or political subdivision of the State. Such a batching plant may be placed within the Preserve upon the commencement of such a public project, and immediately after all asphalt or concrete work required for the project has been completed, the batching plant shall be completely removed from the Preserve and the premises shall be restored to the conditions existing prior to the installation of the batching plant. No asphalt or concrete shall be produced by such a batching plant for sale to the general public or for any purposes whatsoever other than the construction of the public project which it is supplying.

s. Fish farming operations.

t. Game preserves, public or private.

u. Biomass fuel manufacture for personal use.

2. If the property is zoned AE, AE-10, AE-20, AE-40, AE-80, A-1 or AF, any additional uses set forth in Subsection B of Sections 9.5, 9.55, 9.6, 9.7, 9.8 and 10.3, and Subsection C of Section 10, of Ordinance No. 352 as presently in effect and as said subsections may be amended from time to time, are deemed to be compatible uses.

3. If the property is zoned in classifications other than AE, AE-10, AE-20, AE-40, AE-80, A-1 or AF, all the uses set forth in Subsection B of Section 9.5, of Ordinance No. 352 as presently in effect and as said subsection may be amended from time to time, are deemed to be compatible uses.

4. If the property is zoned AE, AE-10, AE-20, AE-40, AE-80, A-1 or AF, all the uses which are permitted in the particular zone upon securing a Special Use Permit under the provisions of Ordinance No. 352 as presently in effect and as said provisions may be amended from time to time, are deemed to be compatible uses and may be carried on when such Special Use Permit has been secured. This paragraph refers to those Use Permits listed in paragraph B of Part II of Section 16 of Ordinance No. 352, and to those Use Permits listed in the section of said Ordinance applicable to the specific zone in which the Preserve is located; specifically, Subsection D of Sections 9.5 and 10.3, Subsection E of Sections 9.55, 9.6, 9.7 and 9.8, and paragraphs 2 and 3 of Subsection C of Section 10. If an Agricultural Preserve is located within a zoning classification something other than AE, AE-10, AE-20, AE-40, AE-80, A-1 or AF, then only those uses which are permitted in the AE Zone (Subsection D of Section 9.5) upon securing a Special Use Permit shall be deemed to be compatible uses.

5. The erection, construction, alteration or maintenance of gas, electric, water, and community utility facilities are also

determined to be compatible uses in the Preserve, provided that insofar as such facilities require a Special Use Permit under the provisions of Ordinance 352 as presently in effect and as said provisions may be amended from time to time, and may be carried on when such Special Use Permit has been secured.

B. Nothing within Section A above is intended to deprive the owner or any nonconforming use which they may have, or hereafter acquire, under the Zoning Laws of the State of California or the Zoning Ordinance of the County of Tulare. In addition, because of the many factors which must be considered when issuing Special Use Permits, nothing in said Section A shall be construed to obligate this Board to issue such a Permit if one should be applied for in the future.

C. If the owner of the property within this Preserve enters into a Contract pursuant to the Williamson Act, such property shall not be used for any purpose other than those which are authorized by these Uniform Rules.

D. The Board does further determine that a subdivision, as that term is defined in Section 2 of Ordinance No. 352 as presently in effect and as said Ordinance may be amended from time to time, is not a compatible use and may not be created in the Preserve.

E. All real property, improved and/or unimproved which is shown on the latest adopted tax roll as a unit or as contiguous units and which is owned by the same person or persons, shall not be divided for the purpose of sale, lease or financing after a Williamson Act Contract has been entered into between the owner or owners and the County except in compliance with this paragraph; and any such division of land which is not in compliance with this paragraph shall constitute an incompatible use. If the property is zoned AE, AE-10, AE-20, AE-40, AE-80, A-1 or AF, then such divisions of land may be made in conformity with the provisions of Tulare County Ordiance No. 352, as presently in effect and as said Ordinance may be amended from time to time, applicable to the specific zone in which said property is located. If the property is zoned something other than AE, AE-10, AE-20, AE-40, AE-80, A-1 or AF, then such divisions of land may only be

made in conformity with the provisions of Tulare County Ordinance No. 352, as presently in effect and as said Ordinance may be amended from time to time, applicable to the AE-10 Zone.

The foregoing resolution was adopted at a regular meeting of the Board of Supervisors on the 26th, day of September, 1989, by the following vote:

AYES: Supervisors Gould, Conway, Mangine, Swiney and Reed

NOES: None

ABSTAIN: None

ABSENT: None

Distribution:
Planning & Dev
Assessor
File 5670

9/27/89
mb

APPENDIX C

AIR QUALITY AND GREENHOUSE GAS STUDY

Rexford Solar Farm Project

Air Quality and Greenhouse Gas Study

prepared for

20SD 8ME, LLC
5455 Wilshire Boulevard, Suite 2010
Los Angeles, California 90036
Contact: Venai Shenoy, Director, Land Entitlement

prepared by

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

April 2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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1 Project Description

1.1 Introduction

This study analyzes the air quality, greenhouse gas (GHG) emissions, and potential health risk impacts of the proposed Rexford Solar Farm Project (Project) located in unincorporated Tulare County. Rincon Consultants, Inc. (Rincon) prepared this study under contract to 20SD 8ME, LLC for use by Tulare County, the lead agency. The purpose of this study is to analyze the Project's air quality, GHG, and health risk impacts related to both temporary construction activity and long-term operation of the Project.

1.2 Project Area and Description

The Project Area is located in unincorporated Tulare County, near the community of Ducor. The area is a relatively flat agricultural landscape. The majority of the Project Area is bisected by State Route (SR) 65. Parcels are also located off Richgrove Drive and Avenue 56. The Project Area comprises 42 assessor's parcels totaling approximately 3,620 gross acres. The permanent disturbance acreage associated with development of the solar facility and associated infrastructure (Project Site) in the Project Area would be less than the gross acreage of the Project Area. Figure 1 and Figure 2 show the regional location and immediate vicinity of the Project Area, respectively.

This Project description is abbreviated, focusing on elements of the proposed solar facility that are most relevant for the air quality, health risk, and greenhouse gas analyses. On the parcels, the Project would use solar photovoltaic (PV) panels or modules on mounting frameworks to convert sunlight directly into electricity. This electricity would be delivered from the panels to inverter stations, where the electricity would be converted from direct current (DC) to alternating current (AC). Each parcel may also include an operations and maintenance (O&M) building, substations, energy storage systems, and/or transmission facilities, as necessary. In addition to the solar PV sites, the Project would include a gen-tie corridor to deliver power from the solar facility to the electrical grid. This corridor would run to the Southern California Edison Vestal Substation via an overhead and/or underground generation tie line (gen-tie).

Figure 1 Regional Location

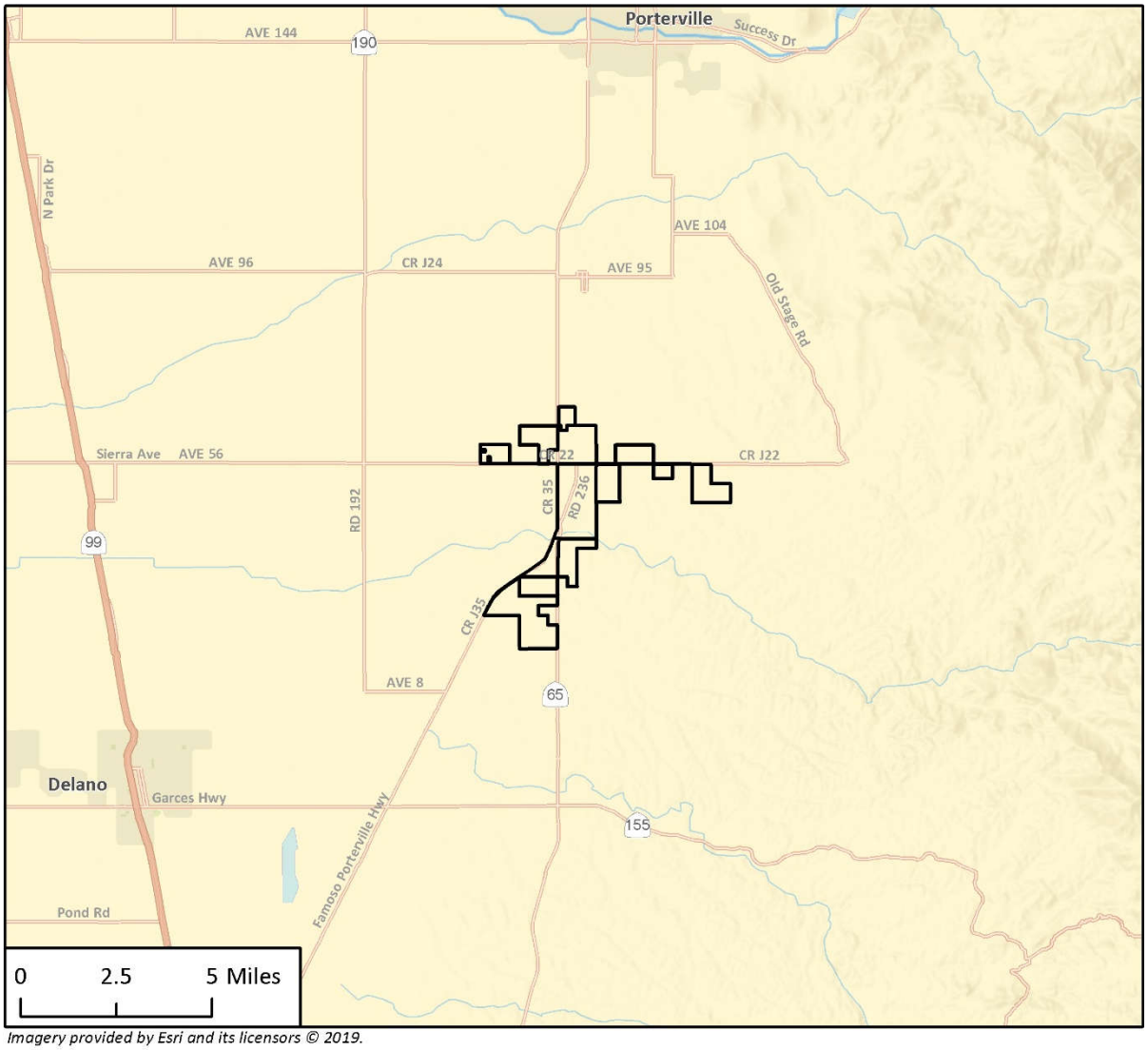
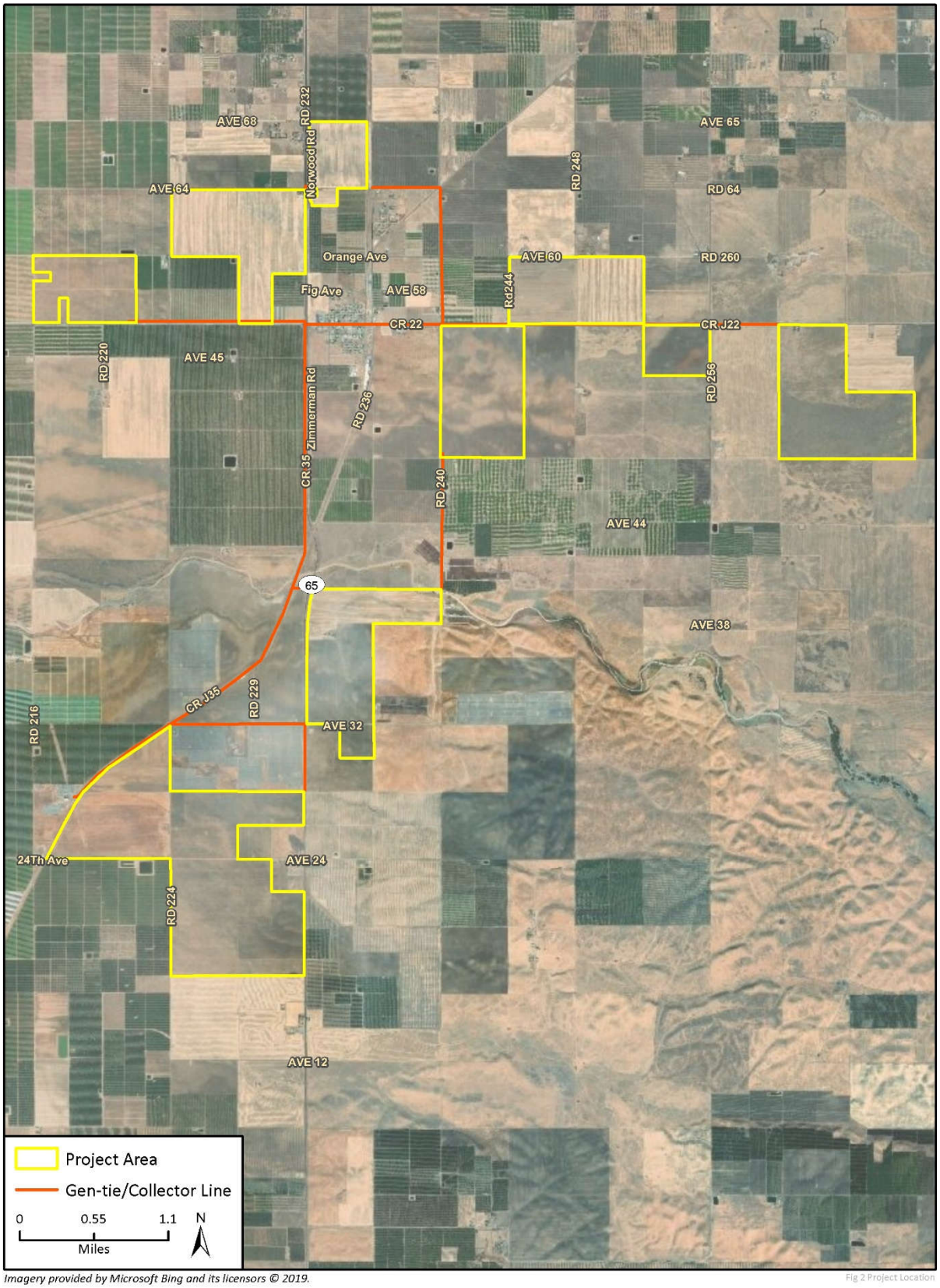


Figure 2 Project Location



Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 2 Project Location

1.3 Construction Activities

Construction of all Project components would occur over approximately 12 to 30 months, beginning as early as the fourth quarter of 2021 (i.e., October 1, 2021). Construction of the Project would include the following types of activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Collector line installation
- Architecture and landscaping

Each Project parcel may be constructed simultaneously and phases of construction would overlap. Table 1 shows the construction schedule, number of workdays, and overlapping phases that were assumed in the analysis.

Construction traffic would primarily access the Project from State Route 65, and may also utilize County roads. It is estimated that up to 1,000 workers per day (during peak construction periods) would be required during the construction of the Project. On-road traffic would consist of employee and vendor vehicle trips. The number of vehicle trips would vary by month depending on the construction activities.

Heavy construction is expected to occur between 7:00 AM and 7:00 PM, Monday through Friday. Additional hours may be necessary to make-up schedule deficiencies or to complete critical construction activities. Some activities may continue 24 hours per day, seven days per week. Nighttime activities could include, but are not limited to, refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning.

Materials and supplies would be delivered to the Project Site by truck. Truck deliveries would normally occur during daylight hours. However, there could be offloading and/or transporting of materials to the Project Site on weekends and during evening hours.

Earthmoving activities are expected to be limited to the construction of access roads, O&M buildings, substations, energy storage systems, and storm water protection or storage (detention) facilities. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas.

Table 1 Overall Project Construction Schedule

Phase	Work Days	Month 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Phase 1: Site Prep & Grading	114																											
Phase 2: Tracker Foundations	175																											
Phase 3: Underground Cabling	175																											
Phase 4: Mechanical Installation	204																											
Phase 5: Electrical Installation	234																											

Note: Construction schedule assumptions are based on the Eland 1 Solar Project, such that the number of days per the site preparation and grading phase were proportionally scaled up based on an overall increase in acreage and the number of days per the tracker foundation, underground cabling, mechanical installation and electrical installation phase were phase were proportionally scaled up based on an overall increase in solar farm capacity from 500 MW to 700 MW.

1.4 Operational Activities

Once completed, the Project would generally be limited to the following maintenance activities:

- Cleaning PV panels
- Monitoring electricity generation
- Providing site security
- Maintaining the facility: replacing or repairing inverters, wiring, and PV modules

The Project would operate continuously, seven days a week, until the anticipated repowering or decommissioning of the Project in 30 to 40 years. It is expected that the Project would require an operational staff of up to 20 full-time employees. The Project may share an O&M, substation, and/or transmission facilities with one or more nearby energy projects, which could reduce the proposed Project's on-site operational staff. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available.

2 Air Quality

2.1 Background

2.1.1 Environmental Setting

a. Topography and Meteorological Conditions

The Project Site is located in unincorporated Tulare County, near the community of Ducor. The Project Site is located in the San Joaquin Valley Air Basin (Air Basin), which occupies the southern half of the Central Valley and comprises eight counties: San Joaquin, Stanislaus, Fresno, Merced, Madera, Kings, Tulare, and portions of Kern County. The Air Basin is approximately 250 miles long and 35 miles in width (on average) and is bordered by the Coast Range Mountains on the west, the Sierra Nevada mountains on the east, and the Tehachapi Mountains to the south. On the valley floor, the Air Basin is open only to the north, which heavily influences prevailing winds (San Joaquin Valley Air Pollution Control District [SJVAPCD] 2015a).

Although marine air generally flows into the Air Basin from the San Francisco Bay Area through the Carquinez Strait (a gap in the Coast Range Mountains) and low mountain passes such as Altamont Pass and Pacheco Pass, the mountain ranges restrict air movement through the Air Basin. Additionally, most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet). These topographic features result in weak airflow and poor dispersion of pollutants and as a result, the Air Basin is highly susceptible to pollutant accumulation.

The average daily maximum and minimum summer temperatures (i.e., August) in unincorporated Tulare County near the Project Site are 98.1 degrees Fahrenheit (°F) and 66.4°F, respectively, and the average daily maximum and minimum winter (i.e., January) temperatures are 56.6°F and 36.6°F, respectively (Western Regional Climate Center [WRCC] 2017). Average annual precipitation is 7.2 inches.

b. Air Pollutants of Concern

The United States Environmental Protection Agency (USEPA) has identified criteria air pollutants that are a threat to public health and welfare. These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare standards. Criteria pollutants that are a concern in the Air Basin are described below.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving precursor organic compounds (POC) and nitrogen oxides (NO_X). POC and NO_X are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of POC and NO_X under the influence of wind and sunlight. Ozone concentrations tend to be

higher in the late spring, summer, and fall, when long sunny days combine with summertime temperature inversions[1] to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone. Exposure to elevated ozone concentrations can cause eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is an air quality pollutant of concern because it acts as a respiratory irritant. NO_2 is a major component of the group of gaseous nitrogen compounds commonly referred to as NO_X. A precursor to ozone formation, NO_X is produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, NO_X emitted from fuel combustion is in the form of nitric oxide (NO) and NO_2. NO is often converted to NO_2 when it reacts with ozone or undergoes photochemical reactions in the atmosphere. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of the air on high pollution days, especially in conjunction with high ozone levels.

Carbon Monoxide

Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease.

Particulate Matter

Particulates less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$) can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. According to a study by the California Air Resources Board (CARB), exposure to ambient $PM_{2.5}$ can be associated with approximately 7,300 to 11,000 annual premature deaths statewide (CARB 2010). Particulates also can damage materials and reduce visibility. Research has indicated that there are associations between increased levels of ambient particulate matter and increased adverse respiratory health. For PM_{10}, there are associations between particulate levels and decreased pulmonary function, increased number of asthma attacks, increased asthma

[1] Inversions occur when warm air sits over cooler air, trapping the cooler air at elevations near or above ground level. When these inversions occur in the Basin they trap pollutants from dispersing vertically while the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally.

medication usage, increased emergency room visits, and hospital admissions for respiratory illness, and increased daily mortality (CARB 2004).

Other Criteria Pollutants

Sulfur dioxide (SO_2) is a combustion product of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (both PM_{10} and $PM_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. Lead has a range of adverse neurotoxic health effects and was formerly released into the atmosphere primarily via the combustion of leaded gasoline. The use of leaded gasoline ceased in the United States after 1995, resulting in decreasing levels of atmospheric lead. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of ozone are referred to and regulated as reactive organic gases (ROG). Sources of ROGs include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint. The primary health effects of ROGs result from the formation of ozone and its related health effects.

c. Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are another group of pollutants of concern. Assembly Bill 1807 (AB 1807) sets forth a procedure for the identification and control of TACs in California. CARB defines a TAC as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. Because no safe levels of TACs can be determined, there are no ambient air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. Although construction activity is short-lived, it may increase TAC concentrations in the short term at nearby sensitive receptors. A common source of TAC emissions during construction activities is diesel particulate matter (DPM) due to the operation of diesel-powered equipment and heavy-duty trucks. Because DPM is the primary contaminant of concern for construction of the Project and would be the TAC emitted in the largest quantity, health risks were assessed as they relate to DPM exposure.

Diesel Particulate Matter

Diesel engine fuel combustion forms an important fraction of the particulate matter emission inventory, as particulates in diesel emissions are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. The Office of Environmental Health Hazard Assessment (OEHHA) reviewed and evaluated the potential for diesel exhaust to affect human health, and the associated scientific uncertainties. Based on the available scientific evidence, it was determined that a level of DPM exposure has not been identified, below which no carcinogenic effects are anticipated. The Scientific Review Panel that approved the OEHHA report determined that, based on studies to date, 3×10^{-4} micrograms per cubic meter ($\mu g/m^3$) is a reasonable estimate of the unit risk for DPM. This means that a person exposed to a DPM concentration of 1 $\mu g/m^3$ continuously over the course of a lifetime has a 3 per 10,000 chance (or 300 in one million chance) of contracting cancer due to this exposure. In 2000, the statewide estimated average concentration of diesel PM was 1.26 $\mu g/m^3$ for indoor and outdoor ambient air. If DPM concentrations remained the same, about 380 excess cancers per one million population could be expected (CARB 2000). Therefore, CARB has determined that these particulate emissions are a TAC.

DPM emissions are estimated to be responsible for about 70 percent of the total ambient statewide air toxics risk. DPM can also be responsible for elevated localized or near-source exposures (“hot-spots”).

Depending on the activity and nearness to receptors, these potential risks are as high as 1,500 per million or more (CARB 2000). CARB staff have conducted risk characterization scenarios to determine the potential excess cancer risks involved when individuals are near various sources of diesel engine emissions, ranging from school buses to high volume freeways. The purpose of the risk characterization was to estimate, through air dispersion modeling, the cancer risk associated with typical diesel-fueled engine or vehicle activities based on modeled PM concentration at the point of maximum impact. The study included various sources of DPM emissions, including idling school buses, truck stops, low- and high-volume freeways, and other sources. High-volume freeways (20,000 or more trucks per day) were estimated to cause 800-1,700 per million potential excess cases of cancers, while low-volume freeways (2,000 or fewer trucks per day) were estimated to cause about 100-200 per million potential excess cases of cancers statewide (CARB 2000).

d. Dust-related Concerns

Valley Fever

Valley Fever or coccidioidomycosis is caused locally by the microscopic fungus *Coccidioides immitis (C. immitis)*. The *Coccidioides* fungus resides in the soil in southwestern United States, northern Mexico, and parts of Central and South America. All of Tulare County is in the endemic area for Valley Fever with over 10 cases annually of Valley Fever per 100,000 people (California Department of Industrial Relations 2017). Infection occurs when the spores of the fungus become airborne and are inhaled. The fungal spores become airborne when contaminated soil is disturbed by human activities, such as construction and agricultural activities, and natural phenomenons, such as wind storms, dust storms, and earthquakes. About 60 percent of infected persons have no symptoms. The remainder develop flu-like symptoms that can last for a month and tiredness that can sometimes last for longer than a few weeks. A small percentage of infected persons (<1 percent) can develop disseminated disease that spreads outside the lungs to the brain, bone, and skin. Without proper treatment, Valley Fever can lead to severe pneumonia, meningitis, and even death. Symptoms may appear between one to four weeks after exposure (Los Angeles County Health Department 2013).

Diagnosis of Valley Fever is conducted through a sample of blood, other body fluid, or biopsy of affected tissue. Valley Fever is treatable with anti-fungal medicines and is not contagious. Once recovered from the disease, the individual is protected against further infection. Persons at highest risk from exposure are those with compromised immune systems, such as those with human immunodeficiency virus (HIV) and those with chronic pulmonary disease. Farmers, construction workers, and others who engage in activities that disturb the soil are at highest risk for Valley Fever. Infants, pregnant women, diabetics, people of African, Asian, Latino, or Filipino descent, and the elderly may be at increased risk for disseminated disease. Historically, people at risk for infection are individuals not already immune to the disease and whose jobs involve extensive contact with soil dust, such as construction or agricultural workers and archeologists (Los Angeles County Health Department 2004).

During drought years, the number of organisms competing with *C. immitis* decreases, and *the C. immitis* remains alive but dormant. When rain finally occurs, the arthrocondia germinate and multiply more than usual because of a decreased number of other competing organisms. Later, the soil dries out in the summer and fall, and the fungi can become airborne and potentially infectious (Kirkland and Fierey 1996).

Naturally Occurring Asbestos

Naturally occurring asbestos is the name for several types of naturally-occurring fibrous minerals found in serpentine rock, and its parent material, ultramafic rock. Exposure to asbestos fibers can result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present. The rock types containing naturally occurring asbestos are abundant in the Sierra foothills and have been identified in Tulare County (CARB 2019a).

e. Existing Ambient Air Quality

The SJVAPCD operates a regional monitoring network that measures the ambient concentrations of criteria pollutants. Existing and probable future general levels of air quality in the Air Basin can normally be inferred from ambient air quality measurements conducted by SJVAPCD at its monitoring stations. The major criteria pollutants of concern in the Central Valley (i.e., ozone, PM_{10}, and $PM_{2.5}$) are monitored at several locations. Background ambient concentrations of pollutants are determined by pollutant emissions in a given area, as well as wind patterns and meteorological conditions for that area. As a result, background concentrations can vary among different locations within Tulare County. However, areas located close together and exposed to similar wind conditions can be expected to have similar background pollutant concentrations. The closest SJVAPCD monitoring station to the Project Site is the Porterville station at 1839 Newcomb Street, which is approximately 7.8 miles north of the Project Site; it monitors ozone and $PM_{2.5}$. Table 2 shows a five-year summary of data collected at the Porterville station compared to National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), which are presented in more detail in Table 4. As of 2019, at the Porterville station, the state one-hour ozone standard and the state and national eight-hour ozone standards were exceeded for multiple days from 2014-2018. The national $PM_{2.5}$ 24-hour standard and the state annual average $PM_{2.5}$ standard were also exceeded for multiple days from 2014-2018. Because annual average $PM_{2.5}$ data for 2014-2017 and PM_{10} data is not available from the Porterville monitoring station, data for these pollutants has been taken from the next closest available monitoring station, the Visalia-N Church Street monitoring station, located approximately 25 miles south of the Project Site. Because monitoring is not generally conducted for pollutants that are no longer likely to exceed ambient air quality standards, there is no recent monitoring data available for CO or SO_2. Additionally, there was no monitoring data available for hydrogen sulfide, vinyl chloride, or other toxic air contaminants in Tulare County or any nearby counties. As shown in Table 2, the average annual $PM_{2.5}$ standards in 2018 were exceeded and the PM_{10} standards were exceeded for multiple days from 2014-2018. Neither of the NO2 standards were exceeded from 2014-2018.

Table 2 Ambient Air Quality at the Monitoring Station[1]

Pollutant	Standard	Monitoring Data by Year				
		2014	2015	2016	2017	2018
Ozone, O_3						
Highest 1-Hour Average, ppm		0.085	**0.100**	**0.106**	**0.100**	**0.093**
Days over State Standard	0.09 ppm	0	4	9	4	0
Highest 8-Hour Average, ppm		**0.074**	**0.091**	**0.092**	**0.090**	**0.085**
Days over State/National Standards [a]	0.070 ppm	4	41	80	34	36
Fine Particulate Matter, $PM_{2.5}$						
Highest 24-Hour Average, µg/m³		**78.2**	**82.6**	**63.9**	**72.3**	**77.4**
Days over National Standard [b]	35 µg/m³	–	–	–	–	–
Annual Average, µg/m³		**17.9**	–	**15.6**	**16.8**	**16.4**
Exceed State/National Standards?	12 µg/m³	Yes	–	Yes	Yes	Yes
Respirable Particulate Matter, PM_{10}[c]						
Highest 24-Hour Average State/National, µg/m³		**104.2/** 102.4	**140.3/** 67.3	**132.5/** 137.1	**145.7/** 144.8	**159.6/ 153.4**
Measured days over State/National Standard [b]	50/150 µg/m³	17/0	67/0	95/0	131/0	162/0
Annual Average (State), µg/m³		–	–	–	**46.9**	**52**
Exceed State Standards?	20 µg/m³	–	–	–	Yes	Yes
Carbon Monoxide, CO[d]						
Highest 1-Hour Average, ppm		ND	ND	ND	ND	ND
Highest 8-Hour Average, ppm		ND	ND	ND	ND	ND
Nitrogen Dioxide, NO_2[c]						
Highest 1-Hour Average State/National, ppb		64/64.5	62/62.3	57/57.5	58/58.1	69/69.2
Days over State/National Standard	180/100 ppb	0	0	0	0	0
Annual Average, ppb		10	9	–	10	10
Exceed State/National Standards?	30/53 ppb	No	No	–	No	No
Sulfur Dioxide, SO_2[d]						
Highest 1-Hour Average, ppm		ND	ND	ND	ND	ND
Highest 24-Hour Average, ppm		ND	ND	ND	ND	ND

Generally, state and national standards are not to be exceeded more than once per year. Values in **bold** are in excess of applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter; ND = no data; and "–" means there was insufficient data available to determine the value. All data were collected from the Porterville station located at 1839 Newcomb Street unless otherwise noted.

[a] USEPA implemented a new eight-hour ozone standard of 70 ppb (or 0.070 ppm) in October 2015 that is consistent with the state standard. All listed exceedances are based on this standard.

[b] Measurements of $PM_{2.5}$ are usually collected every 1 to 3 days. Number of days exceeding the standards is a mathematical estimation of the number of days concentrations would be greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standards; a "—" indicates that there was not enough data for the mathematical estimation.

[c] Because annual average $PM_{2.5}$ data for 2014-2017, PM_{10}, and NO_2 data is not available from the Porterville monitoring station, data for these pollutants has been taken from the next closest available monitoring station, the Visalia-N Church Street monitoring station.

[d] Because monitoring is not generally conducted for pollutants that are no longer likely to exceed ambient air quality standards, there is no recent monitoring data available for CO or SO_2.

Source: CARB 2019b

As required by the federal Clean Air Act (CAA), the United States Environmental Protection Agency (USEPA) has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. To protect human health and the environment, the USEPA has set "primary" and "secondary" maximum ambient standards for each of the criteria pollutants. Primary standards were set to protect human health, particularly sensitive individuals such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards (CAAQS) for most of the criteria air pollutants. If ambient air quality concentrations of the pollutants of concern are below the NAAQS and CAAQS standards, then health impacts are not anticipated. However, when concentrations of the air pollutants exceed the NAAQS and CAAQS standards, the health impacts are considered to vary based on the level of exceedance. The USEPA has established the Air Quality Index (AQI) to characterize health impacts based on the ambient air concentrations of a given pollutant (USEPA 2019). Based on the USEPA's AQI calculator, an AQI for each of the pollutants that exceeded NAAQS between 2014-2018 was established using the highest concentration recorded by local air monitoring stations. The highest 1-hour ozone concentration of 106 ppb generated an AQI below 100 which is not reported under USAEPA's AQI scale for 1-hour ozone concentrations. The highest 8-hour ozone concentration of 92 ppb that occurred is a 166 on the AQI scale and is considered unhealthy for all groups. The highest 24-hour average PM2.5 concentration of 82.6 is a 165 on the AQI scale and is considered unhealthy for all groups. The highest 24-hour average PM10 concentration of 159.6 is a 103 on the AQI scale and is considered unhealthy for sensitive groups such as people with respiratory disease. Table 3 summarizes the AQI and health effects for the criteria pollutants that exceeded NAAQS between 2014-2018 near the project site.

Table 3 Air Quality Index and Health Effects

Pollutant	Air Quality Index	Health Effects Description
Ozone, O_3		
Highest 8-Hour Average	166-Unhealthy	Sensitive groups include children and people with asthma. Health impacts include a greater likelihood of respiratory symptoms and breathing difficulty in active children/adults and people with respiratory disease, such as asthma; there is the possibility of respiratory effects in the general population. Sensitive groups should avoid prolonged outdoor exertion while everyone else should limit prolonged outdoor exertion.
Fine Particulate Matter, $PM_{2.5}$		
Highest 24-Hour Average	165-Unhealthy	Sensitive groups include people with respiratory or heart disease, the elderly and children. Health impacts include increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly as well as increased respiratory effects in the general population. Sensitive groups should avoid prolonged exertion and the general population to should limit prolonged exertion.
Fine Particulate Matter, PM_{10}		
Highest 24-Hour Average	103-Unhealthy for Sensitive Groups	Sensitive groups include people with respiratory disease. Health impacts include increased likelihood of respiratory symptoms and aggravation of lung disease, such as asthma. Sensitive groups should limit outdoor exertion

AQI presented is based on the highest concentration recorded between 2014-2018.

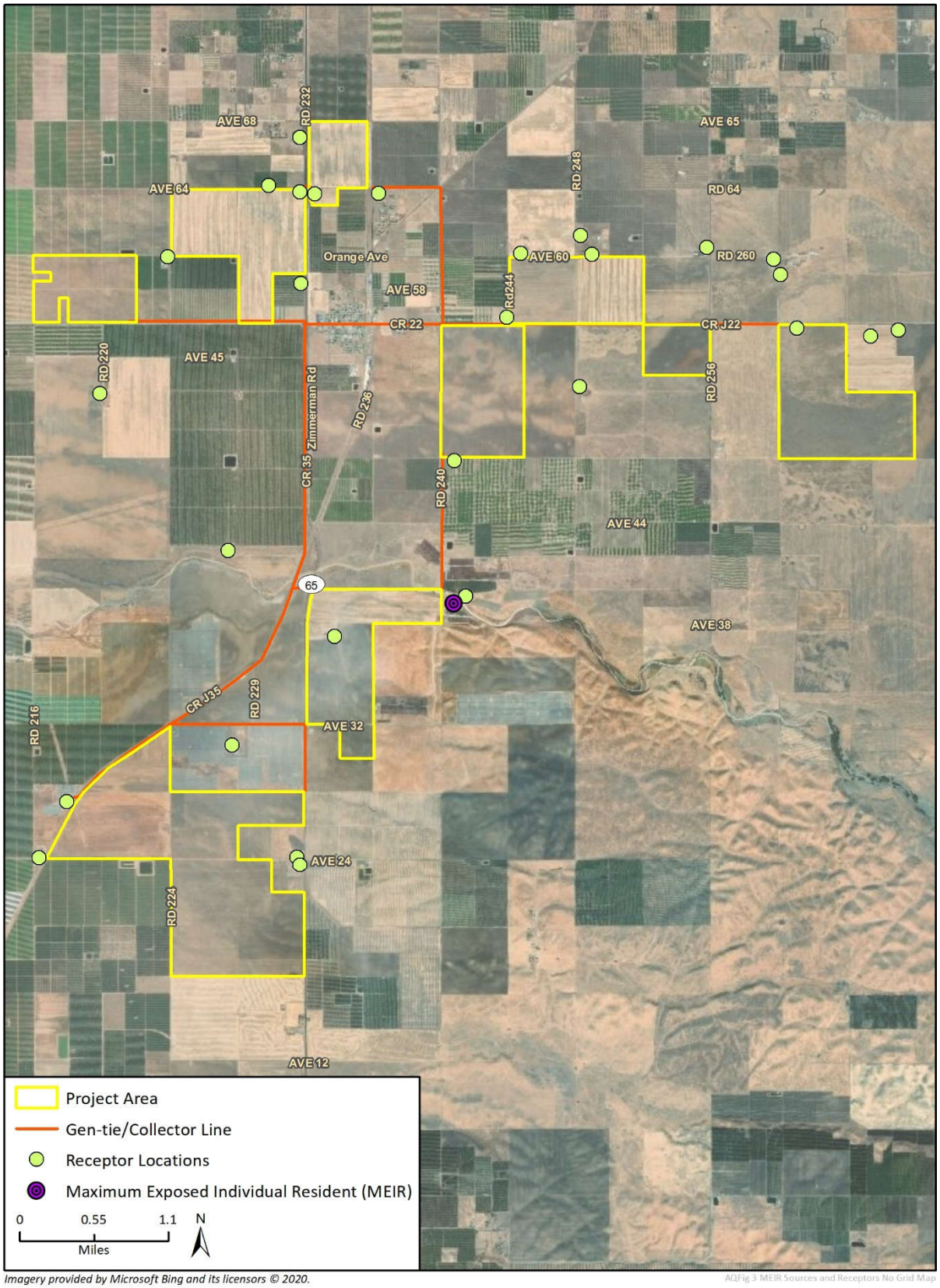
Source: USEPA 2019

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirmed are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with greater associated exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system. The SJVAPCD considers hospitals, schools, parks, playgrounds, daycare centers, nursing homes, convalescent facilities, and residential areas as sensitive receptors (SJVAPCD 2015a).

The sensitive receptors with the highest potential to be affected by the Project include residential land uses located in the community of Ducor, within one mile (5,280 feet) of the Project Site. While there are several agricultural properties adjacent to the Project Site, there are four rural residences located within 500 feet of the Project Site. The nearest sensitive receptor to the Project Site is a rural residence located approximately 90 feet southwest of the Project Site boundary across Road 224. See Figure 3 for identified receptor locations nearest the project boundary. It should be noted that this figure only shows individual receptor locations nearest the project boundary. However, modeling of health risk as described in detail below includes the use of receptor grids that overlay the entire project area and fine receptor grids over the town of Ducor and community clusters.

Figure 3 Sensitive Receptor Locations



2.1.2 Regulatory Setting

a. Federal and State Criteria Air Pollutants

Regulation of air pollution is achieved through both national and state ambient air quality standards and emission limits for individual sources of air pollutants. The CAA was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, to achieve the purposes of Section 109 of the CAA [42 USC 7409], the USEPA developed primary and secondary National Ambient Air Quality Standards (NAAQS). NAAQS have been designated for the following criteria pollutants of primary concern: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with diameters of up to ten microns (PM_{10}) and up to 2.5 microns ($PM_{2.5}$), and lead (Pb). The primary NAAQS "in the judgment of the Administrator , based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health" and the secondary standards are to "protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The USEPA classifies specific geographic areas as either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS. The SIP is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. The California Air Resource Board (CARB) is the lead agency for all purposes related to the SIP under state law.

The California Clean Air Act (CCAA) was enacted in 1988 (California Health and Safety Code Section 39000 et seq.). Under the CCAA the state has developed the California Ambient Air Quality Standards (CAAQS), which are generally more stringent than the NAAQS. In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Similar to the federal CAA, the CCAA classifies specific geographic areas as either "attainment" or "non-attainment" areas for each pollutant, based on the comparison of measured data within the CAAQS. Table 4 lists the current federal and state standards for regulated pollutants and the Air Basin's attainment status for each standard.

Table 4 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	State Standard		National Standard	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8-Hour 1-Hour	0.070 ppm 0.090 ppm	Nonattainment/ Severe Nonattainment*	0.070 ppm –	Nonattainment/ Extreme*
Carbon Monoxide	1-Hour 8-Hour	9.0 ppm 20 ppm	Attainment/ Unclassified	9.0 ppm 35 ppm	Attainment/ Unclassified
Nitrogen Dioxide	1-Hour Annual	0.180 ppm 0.030 ppm	Attainment	0.100 ppm 0.053 ppm	Attainment/ Unclassified
Sulfur Dioxide	1-Hour 3-Hour 24-Hour Annual	0.25 ppm – 0.04 ppm –	Attainment	0.075 ppm 0.5 ppm* 0.14 ppm 0.03 ppm	Attainment/ Unclassified
Respirable Particulate Matter (PM_{10})	24-Hour Annual	50 μg/m³ 20 μg/m³	Nonattainment	150 μg/m³ –	Attainment
Fine Particulate Matter ($PM_{2.5}$)	24-Hour Annual	– 12 μg/m³	Nonattainment	35 μg/m³ 12 μg/m³	Nonattainment
Hydrogen Sulfide	1 Hour	0.03 ppm	Unclassified	No Federal Standard	No Federal Standard
Sulfates	24 Hour	25 μg/m³	Attainment	No Federal Standard	No Federal Standard
Vinyl Chloride	24 Hour	0.010 ppm	Attainment	No Federal Standard	No Federal Standard
Lead	30-Day Quarterly	1.5 μg/m³ –	Attainment	– 1.5 μg/m³	No Designation/ Classification

ppm = parts per million

ppb = parts per billion

μg/m³ = micrograms per cubic meter

* Secondary National Standard

Source: SJVAPCD 2018a

As shown in Table 4, the Air Basin currently is classified as nonattainment for the one-hour state ozone standard as well as for the federal and state eight-hour ozone standards. The Air Basin also is designated as nonattainment for the state annual arithmetic mean and national 24-hour $PM_{2.5}$ standards. Additionally, the Air Basin is classified as nonattainment for the state 24-hour and annual arithmetic mean PM_{10} standards. The Air Basin is unclassified or classified as attainment for all other pollutants standards (SJVAPCD 2018a).

b. Regional

San Joaquin Valley Air Pollution Control District

The Project would be located within the jurisdiction of the SJVAPCD, which regulates air pollutant emissions for all sources throughout the Air Basin other than motor vehicles. The SJVAPCD enforces regulations and administers permits governing stationary sources. The following regional rules and regulations would apply to the Project:

- **Regulation VIII (Fugitive PM_{10} Prohibitions)** contains rules developed pursuant to USEPA guidance for "serious" PM_{10} nonattainment areas. Rules included under this regulation limit fugitive PM_{10} emissions from the following sources: construction, demolition, excavation, extraction and other earth moving activities, bulk materials handling, carryout and track-out, open areas, paved and unpaved roads, unpaved vehicle/equipment traffic areas, and agricultural sources. Table 5 contains control measures that the Applicants would be required to implement during Project construction activities pursuant to Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities.
- **Rule 4101 (Visibility)** limits the visible plume from any source to 20 percent opacity.
- **Rule 4102 (Nuisance)** prohibits the discharge of air contaminants or other materials in quantities that may cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public.
- **Rule 4601 (Architectural Coatings)** limits volatile organic compound (VOC) emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.
- **Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations)** limits VOC emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations and applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.
- **Rule 9510 (Indirect Source Review)** requires certain development projects to mitigate exhaust emissions from construction equipment greater than 50 horsepower to 20 percent below statewide average NO_X emissions and 45 percent below statewide average PM_{10} exhaust emissions. This rule also requires applicants to reduce baseline emissions of NO_X and PM_{10} emissions associated with operations by 33.3 percent and 50 percent respectively over a period of 10 years (SJVAPCD 2017b).

In addition to reducing a portion of the development project's impact on air quality through compliance with District Rule 9510, a developer can further reduce the project's impact on air quality by entering into a "Voluntary Emission Reduction Agreement" (VERA) with the District to address mitigation requirements under CEQA. Under a VERA, the developer may fully mitigate project emission impacts by providing funds to the District, which then are used by the District to administer emission reduction projects on behalf of the project proponent (SJVAPCD 2015b).

Table 5 SJVAPCD Rule 8021 Measures Applicable to the Project

No.	Measure
A.1	Pre-water site sufficient to limit visible dust emissions (VDE) to 20 percent opacity.
A.2	Phase work to reduce the amount of disturbed surface area at any one time.
B.1	Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity; or
B.2	Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity. If using wind barriers, control measure B1 above shall also be implemented.
B.3	Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20 percent opacity and meet the conditions of a stabilized unpaved road surface.
C.1	Restrict vehicular access to the area.
C.2	Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.58 of Rule 8011.
5.3.1	An owner/operator shall limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.
5.3.2	An owner/operator shall post speed limit signs that meet state and federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.
5.4.1	Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20 percent opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.
5.4.2	Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.
6.3.1	An owner/operator shall submit a Dust Control Plan to the Air Pollution Control Officer (APCO) prior to the start of any construction activity on any site that will include ten acres or more of disturbed surface area for residential developments, or five acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the APCO within 10 days prior to the commencement of earthmoving activities via fax or mail. The requirement to submit a dust control plan shall apply to all such activities conducted for residential and non-residential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity.
6.3.3	The Dust Control Plan shall describe all fugitive dust control measures to be implemented before, during, and after any dust generating activity.
6.3.4	A Dust Control Plan shall contain all the [administrative] information described in Section 6.3.6 of this rule. The APCO shall approve, disapprove, or conditionally approve the Dust Control Plan within 30 days of plan submittal. A Dust Control Plan is deemed automatically approved if, after 30 days following receipt by the District, the District does not provide any comments to the owner/operator regarding the Dust Control Plan.

Source: SJVAPCD 2004

Air Quality Management Plans

As required by the federal CAA and the California CAA, air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the standards have been achieved. Jurisdictions of nonattainment areas also are required to prepare an air quality management plan (AQMP) that includes strategies for achieving attainment. The SJVAPCD has approved AQMPs demonstrating how the Air Basin will reach attainment with the federal one-hour and eight-hour ozone, PM_{10}, and $PM_{2.5}$ and California CO standards.

Ozone Attainment Plans

The *Extreme Ozone Attainment Demonstration Plan*, adopted by the SJVAPCD Governing Board October 8, 2004, sets forth measures and emission-reduction strategies designed to attain the federal one-hour ozone standard by November 15, 2010, as well as an emissions inventory, outreach, and rate of progress demonstration. This plan was approved by the USEPA on March 8, 2010; however, the USEPA's approval was subsequently withdrawn effective November 26, 2012, in response to a decision issued by the U.S. Court of Appeals for the Ninth Circuit (*Sierra Club v. EPA*, 671 F.3d 955) remanding USEPA's approval of these SIP revisions. Concurrent with the USEPA's final rule, CARB withdrew the 2004 plan. The SJVAPCD developed a new plan for the one-hour ozone standard, the *2013 Plan for the Revoked 1-Hour Ozone Standard*, which it adopted in September 2013.

The *2007 Ozone Plan*, approved by CARB on June 14, 2007, demonstrates how the Air Basin would meet the federal eight-hour ozone standard. The *2007 Ozone Plan* includes a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the Air Basin. Additionally, this plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution, and an increase in state and federal funding for incentive-based measures to create adequate reductions in emissions to bring the entire Air Basin into attainment with the federal eight-hour ozone standard (SJVAPCD 2007a).

On April 16, 2009, the SJVAPCD Governing Board adopted the *Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP)* (SJVAPCD 2009). In part, the *2009 RACT SIP* satisfied the commitment by the SJVAPCD for a new reasonably available control technology analysis for the one-hour ozone plan (see discussion of the USEPA withdrawal of approval in the *Extreme 1-Hour Ozone Attainment Demonstration Plan* summary above) and was intended to prevent all sanctions that could be imposed by USEPA for failure to submit a required SIP revision for the one-hour ozone standard. With respect to the eight-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the Air Basin's designation as an extreme ozone nonattainment area), evaluates SJVAPCD rules against new *Control Techniques Guidelines* promulgated since August 2006, and reviews additional rules and amendments that had been adopted by the Governing Board since August 17, 2006, for reasonably available control technology consistency.

The *2013 Plan for the Revoked 1-Hour Ozone Standard* was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013a). Based on implementation of the ongoing control measures, preliminary modeling indicates that the Air Basin will attain the one-hour ozone standard before the final attainment year of 2022 and without relying on long-term measures under the federal CAA Section 182(e)(5) (SJVAPCD 2013).

On June 19, 2014, the Governing Board adopted the *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan* (SJVAPCD 2014) that includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NO_x reduction

rules and concludes that they satisfy requirements for stringency, applicability, and enforceability, and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance the Air Basin's ozone attainment. Each ROG rule evaluated in the 2009 RACT SIP has been subsequently approved by the USEPA as meeting RACT within the last two years. The ozone attainment strategy, therefore, focuses on further NO_X reductions.

SJVAPCD adopted the *2016 Ozone Plan for the 2008 8-Hour Ozone Standard* in June 2016. This plan satisfies CAA requirements and ensures expeditious attainment of the 75 parts per billion eight-hour ozone standard (SJVAPCD 2016a).

PARTICULATE MATTER ATTAINMENT PLANS

In June 2007, the SJVAPCD Board adopted the *2007 PM_{10} Maintenance Plan and Request for Redesignation* (SJVAPCD 2007b). This plan demonstrates how PM_{10} attainment in the Air Basin will be maintained in the future. Effective November 12, 2008, USEPA redesignated the Air Basin to attainment for the PM_{10} NAAQS and approved the *2007 PM_{10} Maintenance Plan* (USEPA 2008).

In April 2008, the Air Basin Board adopted the *2008 $PM_{2.5}$ Plan* and approved amendments to Chapter 6 of the *2008 $PM_{2.5}$ Plan* on June 17, 2010 (SJVAPCD 2008). This plan was designed to addresses USEPA's annual $PM_{2.5}$ standard of 15 µg/m³, which was established by USEPA in 1997. In December of 2012, the SJVAPCD adopted the *2012 $PM_{2.5}$ Attainment Plan*, which address USEPA's 24-hour $PM_{2.5}$ standard of 35 µg/m³, which was established by USEPA in 2006 (SJVAPCD 2012). In April 2015, the SJVAPCD Board adopted the *2015 Plan for the 1997 $PM_{2.5}$ Standard* that addresses the USEPA's annual and 24-hour $PM_{2.5}$ standards established in 1997 after the Air Basin experienced higher $PM_{2.5}$ levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions, and the SJVAPCD was unable to meet the initial attainment date of December 31, 2015 (SJVAPCD 2015c).

SJVAPCD adopted the *2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard* on September 15, 2016. This plan addresses the USEPA federal annual $PM_{2.5}$ standard of 12 micrograms per cubic meter (µg/m³), established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment (SJVAPCD 2016b).

SJVAPCD adopted the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards* in November 2018. This plan addresses the USEPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and the 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. The plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable as required under the federal CAA (SJVAPCD 2018b).

c. Local

Tulare County

Tulare County has established a series of goals, policies, and implementation measures in the Tulare County General Plan 2030 Air Quality Element to improve air quality through a regional approach and interagency cooperation, improve air quality by reducing air emissions related to transportation, improve air quality and minimize impacts to human health and the economy of the County through smart land use planning and design, and implement the best available controls and monitoring necessary to regulate air emissions (Tulare County 2012). Applicable policies related to air quality are as follows:

AQ-1.3 Cumulative Air Quality Impacts: The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility: The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance: The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-2.2 Indirect Source Review: The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:

1. Providing bicycle access and parking facilities,
2. Increasing density,
3. Encouraging mixed use developments,
4. Providing walkable and pedestrian-oriented neighborhoods,
5. Providing increased access to public transportation,
6. Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and
7. Establishing telecommuting programs or satellite work centers.

AQ-4.2 Dust Suppression Measures: The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

1. Site watering or application of dust suppressants,
2. Phasing or extension of grading operations,
3. Covering of stockpiles,
4. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
5. Revegetation of graded areas

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions: The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured

AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection: Asbestos is of concern to Tulare County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. See Implementation Measure 15.

Implementation Measures

The following air quality implementation measures established in the Tulare County General Plan apply to the Project:

- **3.** The County shall review all discretionary permit applications to consider cumulative air impacts through the CEQA process, and require the preparation of an EIR with alternatives if a fair argument can be made that there will be significant impacts on air quality.
- **14.** In order to reduce the dust impacts of new development on adjoining residences, the County shall require adequate watering and dust control measures to prevent visible emissions exceeding 20 percent opacity from construction sites and roads as a condition of approval.
- **15.** The County shall require the following regulated activities including construction or digging on a site containing naturally occurring asbestos in rock or soils and the sale or use of serpentine material or rock containing asbestos materials for surfacing to conform with the asbestos related regulations and programs, including implementation of Title 17, Section 93105 and 93106 of the California Code of Regulations (Asbestos Airborne Toxic Control Measure-Asbestos Containing Serpentine) and Rule 4002 and Rule 7050 as implemented and enforced by the SJVAPCD.

2.2 Air Quality Impact Analysis

2.2.1 Methodology and Significance Thresholds

Methodology

Methodology for Calculating Emissions

Construction and operational emissions were estimated from several emissions models and associated spreadsheet calculations, depending on the source type and data availability. The primary emissions models used included CARB's on-road vehicle emission factor model (EMFAC2017)[2] and the off-road diesel equipment emissions analysis and inventory (OFFROAD2017). Emission factors were also obtained from the USEPA AP-42 *Compilation of Air Pollutant Emissions Factors* (USEPA 2006). Short-term and annual emissions were estimated using appropriate emission factors, the number of pieces of equipment, daily operating hours, and the associated schedules. Refer to Appendix AQGHG for details on equipment fleet, hours of operation, vehicle miles traveled, construction schedule, and other

[2] On September 19, 2019 the National Highway Traffic Safety Agency (NHTSA) and the USEPA issued a final action entitled the One National Program on Federal Preemption of State Fuel Economy Standards Rule. The rule repeals California's higher fuel efficiency standards, which were originally allowed to address California's unique air quality challenges. The NHTSA and USEPA are still finalizing other portions of the overall Safer Affordable Fuel Efficient (SAFE) Vehicles Rule, including the proposal to lock in model year 2020 GHG/ Corporate Average Fuel Economy (CAFÉ) standards for model years 2021-2026. Assuming this proposal goes into effect, emission rates from EMFAC2017 beyond model year 2020 would be invalidated. This analysis uses mobile emission factors from 2021, which assumes model years up to 2020. Therefore, this analysis would be unaffected by the final decision regarding the SAFE Vehicles Rule.

assumptions used. The following construction and operational sources and activities were analyzed for emissions:

- On-site construction equipment exhaust emissions (all criteria pollutants) – based on EMFAC2017 and OFFROAD2017 emission factors and estimated equipment schedules[2]
- On-site construction equipment fugitive dust emissions (PM_{10} and $PM_{2.5}$) – based on USEPA AP-42 emission factors and estimated equipment schedules
- On-site and off-site haul truck (includes delivery, freight, and dump/water trucks) exhaust emissions (all criteria pollutants) – based on EMFAC2017 and estimated vehicle miles traveled[2]
- On-site and off-site entrained fugitive dust emissions for paved and unpaved road travel – based on AP-42 methodology and estimated vehicle miles traveled
- Worker vehicle emissions for trips to and from the site – based on EMFAC2017 and estimated vehicle miles traveled[2]
- Worker vehicle entrained fugitive dust emissions for paved roads – based on AP-42 methodology and estimated vehicle miles traveled

Trip generation rates for employees and vendors were provided by the applicant and are presented in Appendix AQGHG. It was assumed that one-third of vendor vehicles would be medium-heavy duty trucks and two-thirds would be heavy-heavy duty trucks. Similarly, it was assumed that 73 percent of the worker commute vehicles were light-duty automobiles and the remaining 27 percent were light-duty trucks. Percentages were derived from the distribution of vehicle miles travelled in the Countywide fleet mix from EMFAC2017.[2]

As previously mentioned in Section 1.3, *Construction Activities*, construction at some of the parcels that make up the Project may occur simultaneously and phases of construction would overlap. Overall Project emissions were apportioned to each parcel based on the parcel acreage compared with the Project gross acreage. To provide a conservative analysis, it was assumed that construction activities would occur at each parcel simultaneously. In addition, emissions estimates include implementation of watering twice per day to comply with dust control measures specified in Rule 8021 of Regulation VIII. Construction emissions associated with the Project are discussed below.

Methodology for Determining Health Risk Impacts

Health risk impacts associated with TACs are generally from long-term exposure. Typical sources of TACs include industrial processes such as petroleum refining operations, commercial operations such as gasoline stations and dry cleaners, and diesel exhaust. Health impacts from TAC emissions during the operational phase of the Project are not expected because on-site routine maintenance and periodic PV panel washing, and off-site employee-commute trips would not be a substantial source of ongoing TAC emissions. However, the use of large-scale off-road diesel equipment during Project construction would result in a short-term increase of TAC emissions. DPM would be the TAC emitted in the largest quantity during construction and is the primary contaminant of concern for the Project, thus health risks were assessed as they relate to DPM exposure.

The significance threshold for health risks differs from that used for criteria pollutants in that no specific air quality standards have been established for DPM emissions or many other TACs. Instead, significance thresholds are determined based on an analysis of the number of excess health risks relative to a chosen risk level. Health effects from carcinogenic air toxics usually are described in terms of cancer risk. Non-carcinogenic hazards include chronic and acute effects. Acute effects are due to short-term exposure, while chronic effects are due to long-term exposure to a substance. For chronic

and acute risks, the hazard index is calculated as the summation of the hazard quotients for all chemicals to which an individual would be exposed.

Average concentrations of DPM at the highest exposed existing receptor were used to estimate potential chronic and carcinogenic health risk. DPM does not have an acute health impact and therefore an acute health risk evaluation is not included in this analysis. The health risk calculations were based on standardized equations contained in the current Air Toxics Hot Spots Program Risk Assessment Guidelines (OEHHA 2015). Toxicity values for the pollutants of concern were acquired from the OEHHA *Air Toxics Hot Spots Program Risk Assessment Guidelines* and *Inhalation RELs*[3] as of April 2019 (OEHHA 2015). The carcinogenic health risk equations follow a dose response relationship where the dosage is averaged over a particular timeframe. To provide a conservative analysis, the timeframes for construction and decommissioning activities were assumed to be equivalent. Additionally, exposure duration was not adjusted for time at home to provide a conservative analysis. Because exposure would only occur during construction, the exposure frequency was adjusted to the maximum days construction would occur per year, 260 days. To assess the reasonable worst-case scenario, it was assumed that an individual could be exposed to construction emissions as a child and decommissioning emissions as an adult over the course of a 70-year lifetime. Children are more affected by DPM emissions than adults because of the relatively greater amount of air that they breathe on a daily basis compared to their body weight; therefore, the breathing rate by age was included in the modeled health risk.

The air dispersion modeling for the HRA was performed using the USEPA AERMOD dispersion model, Version 18081. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. For this analysis, AERMOD ready metrological data spanning a four-year period from Porterville (Station ID: 23149), which was pre-processed with AERMET, Version 18081, was obtained from CARB.[4] The meteorological station is approximately 7.8 miles from the northern edge of the Project Site. Emission rates were assumed to vary by the hour and the day; therefore, hourly average emissions rates were limited to the hours of 6:00 a.m. to 5:00 p.m. Monday through Friday. The model was run to obtain the maximum one-hour and average concentration across the anticipated construction period (i.e., 2021, 2022, and 2023). In addition to the identified nearby sensitive receptors, three Cartesian grids encompassing the Project Site and surrounding communities were used to evaluate the Project's potential health impacts and validate that the identified nearby sensitive receptors captured the highest off-site resident exposure. The coarse Cartesian grid encompassed the Project Site and surrounding area with 500-meter spacing, covering an approximately 76 square mile area. A refined Cartesian grid with a 250-meter spacing and square area of 3,000 meters by 3,000 meters was used to evaluate the Project's potential health impact to the community of Ducor. A refined Cartesian grid with a 150-meter spacing and square area of 1,500 meters by 1,500 meters was used to evaluate the Project's potential health impact to the dispersed communities north of Ducor. Figure 4 shows the Cartesian grids and sensitive receptors in relation to the Project Site.

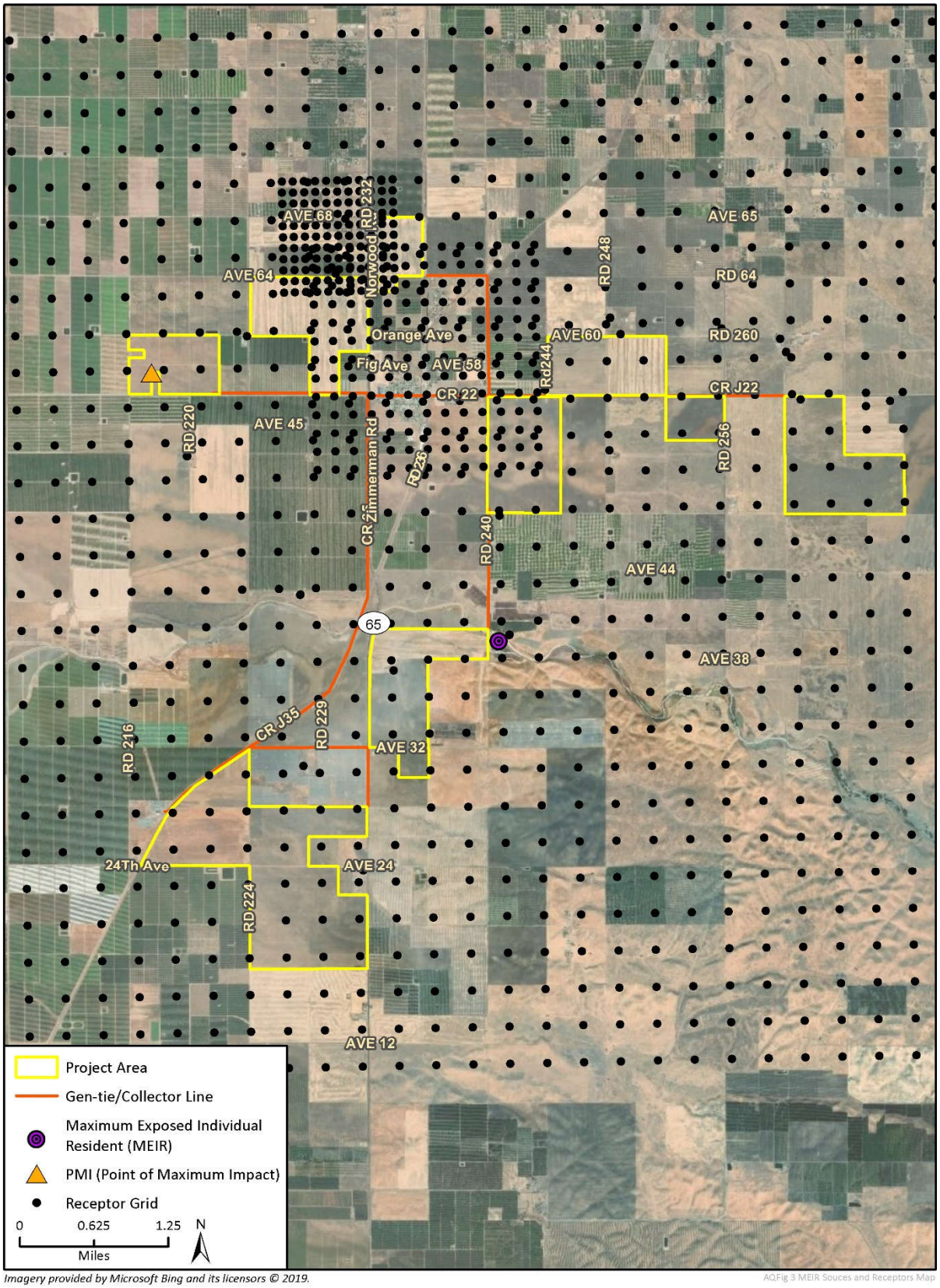
The total PM_{10} exhaust emissions for all on-site diesel equipment for the entire construction period were divided by the construction working days to produce an average emission rate in terms of grams per second per square meter during operating hours. AERMOD was then used to determine a

[3] OEHHA Reference Exposure Levels (RELs) are updated regularly at www.oehha.ca.gov/air/Allrels.html

[4] SJVAPCD recommends use of AERMOD ready meteorological data processed by the SJVAPCD and recommends using all available data for a site when less than five years of data are available.

concentration level in $\mu g/m^3$ at off-site sensitive receptors. Note that the estimated concentration is not a specific prediction of the actual concentrations that would occur at any one point or any specific time over the course of the construction period. Actual concentrations are dependent on many variables, particularly the number and type of equipment working at specific distances during time

Figure 4 Sensitive Receptor Locations



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AQFig 3 MEIR Souces and Receptors Map

periods of adverse meteorology. Various activities would occur at different parcels throughout the Project Site. Equipment would be close to adjacent receptors for a limited period of time and then several miles from the same receptor at other times. Contiguous parcels and the collector lines were input to AERMOD as area sources and construction emissions were apportioned to each parcel block and collector line based on its percentage of the Project's gross acreage. Construction within collector line paths was assumed to occur within a ten-foot wide area. Emissions from construction trucks and equipment were assigned a release height of 3.1 meters, which is the approximate average height of the exhaust port plus a nominal amount of plume rise. Health risk for the Project was evaluated assuming that construction on each parcel occurs simultaneously. As previously mentioned, only the risk associated with construction and decommissioning activities was assessed because operational emissions would not be a substantial source of TAC emissions (Appendix HRA).

Methodology for Conducting Air Quality Impact Assessment

The Air Basin is a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. The current air quality in the Air Basin is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., ROG and NO_X for ozone) potentially contribute to poor air quality. For any phase that results in a pollutant that exceeds the screening threshold of 100 pounds per day of any of the following pollutants: NO_X, ROG, PM_{10}, $PM_{2.5}$, SO_X, and CO, an ambient air quality analysis (AAQA) was conducted following District Rule 2201 AAQA Modeling. An AAQA uses air dispersion modeling to determine if emission increases from a project's construction or operational activities would cause or contribute to a violation of the ambient air quality. If the sum of the modeled pollutant concentration and the corresponding background concentration of each pollutant exceeds the CAAQS and/or NAAQS (listed in Table 4) at the property boundaries, the Project would violate air quality standards and contribute substantially to an existing or projected air quality violation (SJVAPCD 2015a). Maximum one-hour and average annual emissions of all criteria pollutants at the Project's property line during construction and operation were determined via AERMOD. Criteria pollutant concentrations were modeled at over 2,000 receptor points spaced 50 meters apart along the Project's property line and collector lines, and were compared to the CAAQS and NAAQS. Background concentrations for each pollutant were obtained from CARB's Air Quality and Meteorological Information System (AQMIS) for Tulare County using daily data for 2018, which provides a full year of data. CARB's AQMIS reports daily ozone, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ concentrations. CO background concentrations were not available for Tulare County; therefore, data from the nearest county to the Project Site, Kern County, was used. SO_2 concentrations were not available from Tulare or Kern County; therefore, regional concentrations from the San Joaquin Valley Basin were used. Because AQMIS does not report ROG concentrations, ozone concentrations were used as a surrogate for ROG (ROG is a precursor to ozone). Additionally, it was conservatively assumed that NO_2 is reflective of NO_X background concentrations (i.e., a complete conversion of NOX to NO_2). Ambient air concentrations of SO_2 are used as an indicator for SO_X, and therefore, are used interchangeably in this analysis. Appendix AQGHG contains detailed calculations and a summary of the ambient air quality impact analysis undertaken to determine whether construction and operational activities associated with the Project would cause or contribute to ambient air quality impacts.

Significance Criteria

Based on the CEQA Guidelines, the Project would have a significant impact if it would:

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?

The SJVAPCD recommends the use of quantitative thresholds to determine the significance of temporary construction-related pollutant emissions and project operations. SJVAPCD has two sets of significance thresholds for each pollutant for operational emissions depending on whether the activities are for permitted equipment and activities or non-permitted equipment and activities. Project operation does not include permitted equipment or activities such as the use of back-up generators. Therefore, only the operational threshold for non-permitted equipment and activities and construction activities is appropriate for project comparison. These thresholds are shown in Table 6.

Table 6 SJVAPCD Air Quality Significance Thresholds

Pollutant	Operation Thresholds (tpy)	Construction Thresholds (tpy)
NO_X	10	10
ROG[1]	10	10
PM_{10}	15	15
$PM_{2.5}$	15	15
SO_X	27	27
CO	100	100

tpy = tons per year

[1] Reactive Organic Gases (ROG) are formed during combustion and evaporation of organic solvents. ROG are also referred to as Volatile Organic Compounds (VOC).

Source: SJVAPCD 2015

In addition to the annual SJVAPCD thresholds outlined above, SJVAPCD has published the *Ambient Air Quality Analysis Project Daily Emissions Assessment* guidance, which is summarized in Section 8.4.2, *Ambient Air Quality Screening Tools*, of the SJVAPCD's *Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI)*, adopted in March 2015. The *Ambient Air Quality Screening Tools* guidance provides a screening threshold of 100 pounds per day of any of the following pollutants: NO_X, ROG, PM_{10}, $PM_{2.5}$, SO_X, and CO. The screening threshold was used to evaluate construction activities and operational activities separately. Per SJVAPCD's GAMAQI, when assessing the significance of project-related impacts on air quality, the impacts *may* be significant if on-site emissions from construction or operational activities exceed the 100 pounds per day screening level after implementation of all enforceable mitigation measures. In this analysis, for any phase that results in a pollutant that exceeds this screening threshold, an ambient air quality analysis (AAQA) was conducted following District Rule 2201 *AAQA Modeling*. An AAQA uses air dispersion modeling to determine if emission increases from a project's construction or operational activities would, in combination with background concentrations, cause or contribute to a violation of the ambient air quality. If modeled concentrations combined with background concentrations would result in an exceedance of a NAAQS or CAAQS, then District Rule 2201 requires that the maximum modeled concentration of each pollutant be compared to its corresponding Significant Impact Level. If

modeled concentrations do not exceed the Significant Impact Level, then the project would not result in a violation of ambient air quality standards.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SJVAPCD recommends a carcinogenic (cancer) risk threshold of 20 in a million. The Chronic Hazard Index (HIC) is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The SJVAPCD recommends a HIC significance threshold of 1.0 and an acute hazard index (HIA) of 1.0. No short-term, acute relative exposure values are established and regulated for DPM; therefore, acute exposure is not addressed in the HRA.

2.2.2 Project Impacts

Construction Impacts

Construction of the Project would require approximately 12-30 months of continuous activity involving several overlapping phases. To provide for a realistic and conservative estimate, construction was assumed to last for 27 months for the purposes of this analysis. Refer to Section 1.3, *Construction Activities*, for phasing specifics related to the Project construction schedule. Construction of the Project would generate air pollutant emissions from entrained dust, off-road equipment use, and vehicle emissions. Off-site emissions would be generated by construction worker daily commute trips and heavy-duty diesel haul and vendor truck trips. Construction emissions would vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Construction of the gen-tie is incorporated into the provided construction schedule and equipment mix. Therefore, emissions associated with the gen-tie are incorporated directly into the impacts associated with construction of the Project.

As shown in Table 7, absent the requirements of Rule 9510, concurrent construction at all parcels would generate 12.1 tons/year of NO_X and would exceed the NO_X threshold of 10 tons/year in the second year (2022) of construction. This exceedance of the NO_X threshold is largely due to exhaust emissions from off-road construction equipment. However, the Project would be required to comply with SJVAPCD Rule 9510, Indirect Source Review, which requires large development projects to reduce exhaust emissions from construction equipment by 20 percent for NO_X and 45 percent for PM_{10} compared to the statewide average. As shown in Table 8, compliance with SJVAPCD Rule 9510 would reduce annual emissions of NO_X to 9.7 tons/year, which would not exceed SJVAPCD's NO_X threshold. No other criteria pollutant threshold would be exceeded during construction with or without adherence to SJVAPCD Rule 9510.

Table 7 Construction Emissions for Project Site – Without Compliance with SJVAPCD Rule 9510

		Unmitigated Emissions (tons per phase)[2]					
Emission Type	**Source**	**ROG**	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
2021							
Exhaust	Off-Road Construction Equipment	0.2	2.2	<0.1	2.1	0.1	0.1
	On-Road Vehicles	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	1.5	0.2
	On-Road Vehicles (resuspended)	–	–	–	–	0.5	0.1
Total		**0.3**	**2.2**	**<0.1**	**2.2**	**2.1**	**0.4**
Threshold		10	10	27	100	15	15
Exceed Threshold?		No	No	No	No	No	No
2022							
Exhaust	Off-Road Construction Equipment	1.3	11.8	<0.1	11.8	0.6	0.5
	On-Road Vehicles	0.4	0.3	<0.1	1.7	0.4	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	3.2	0.3
	On-Road Vehicles (resuspended)	–	–	–	–	4.5	1.0
Total		**1.7**	**12.1**	**<0.1**	**13.5**	**8.6**	**2.0**
Threshold		10	10	27	100	15	15
Exceed Threshold?		No	**Yes**	No	No	No	No
2023							
Exhaust	Off-Road Construction Equipment	1.1	9.4	<0.1	9.4	0.5	0.4
	On-Road Vehicles	0.4	0.2	<0.1	1.5	0.3	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	2.3	0.2
	On-Road Vehicles (resuspended)	–	–	–	–	4.0	0.9
Total		**1.5**	**9.6**	**<0.1**	**10.9**	**7.1**	**1.7**
Threshold		10	10	27	100	15	15
Exceed Threshold?		No	No	No	No	No	No

Rounded values shown; columns may not add up correctly. Subtotal equals the sum of all exhaust and fugitive dust emissions from off-road construction equipment and on-road vehicles. See Appendix AQGHG for calculations. N/A = not applicable (e.g., no threshold)

[1] Fugitive dust describes particulate matter that is emitted into the air due to earth moving activities or that has been re-suspended.

[2] Emissions by construction year are based on an estimated construction schedule and construction starting on October 1, 2021.

Table 8 Construction Emissions for Project Site – Including Compliance with SJVAPCD Rule 9510

		Mitigated Emissions (tons per phase)[2]						With Water Control[3]	
Emission Type	**Source**	**ROG**	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**PM_{10} (tons)**	**$PM_{2.5}$ (tons)**
2021									
Exhaust	Off-Road Construction Equipment	0.2	1.8	<0.1	2.1	0.1	0.1	0.1	0.1
	On-Road Vehicles	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	1.5	0.2	0.6	0.1
	On-Road Vehicles (resuspended)	–	–	–	–	0.5	0.1	0.4	0.1
Total		**0.3**	**1.8**	**<0.1**	**2.2**	**2.1**	**0.4**	**1.1**	**0.3**
Threshold		10	10	27	100	15	15	15	15
Exceed Threshold?		No	No	No	No	No	No	No	No
2022									
Exhaust	Off-Road Construction Equipment	1.3	9.4	<0.1	11.8	0.3	0.5	0.3	0.5
	On-Road Vehicles	0.4	0.3	<0.1	1.7	0.4	0.1	0.4	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	3.2	0.3	1.4	0.1
	On-Road Vehicles (resuspended)	–	–	–	–	4.5	1.0	4.0	0.9
Total		**1.7**	**9.7**	**<0.1**	**13.5**	**8.3**	**2.0**	**6.1**	**1.7**
Threshold		10	10	27	100	15	15	15	15
Exceed Threshold?		No	No	No	No	No	No	No	No
2023									
Exhaust	Off-Road Construction Equipment	1.1	7.5	<0.1	9.4	0.3	0.4	0.3	0.4
	On-Road Vehicles	0.4	0.2	<0.1	1.5	0.3	0.1	0.3	0.1
Fugitive Dust[1]	Off-Road Construction Activity	–	–	–	–	2.3	0.2	1.0	0.1
	On-Road Vehicles (resuspended)	–	–	–	–	4.0	0.9	3.6	0.8
Total		**1.5**	**7.7**	**<0.1**	**10.9**	**6.9**	**1.7**	**5.2**	**1.5**
Threshold		10	10	27	100	15	15	15	15
Exceed Threshold?		No	No	No	No	No	No	No	No

Rounded values shown; columns may not add up correctly. Subtotal equals the sum of all exhaust and fugitive dust emissions from off-road construction equipment and on-road vehicles. See Appendix AQGHG for calculations. N/A = not applicable (e.g., no threshold)

[1] Fugitive dust describes particulate matter that is emitted into the air due to earth moving activities or that has been re-suspended.

[2] Emissions by construction year are based on an estimated construction schedule and construction starting on October 1, 2021.

[3.] Emissions estimates include implementation of watering twice per day to comply with dust control measures specified in Rule 8021 of Regulation VIII.

Construction Ambient Air Quality Impact Assessment

The Air Basin is a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. The current air quality in the Air Basin is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., ROG and NO_X for ozone) potentially contribute to poor air quality. Based on the Project's construction schedule and activities, NO_X, CO, and PM_{10} emissions have the potential to exceed SJVAPCD's recommended 100 pounds per day screening threshold during construction, as shown in Table 9.

Table 9 Maximum Daily Construction Emissions

	Emissions (lbs/day)					
	ROG	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions	16.7	114.7	0.5	128	112.8	22.7
Threshold	100	100	100	100	100	100
Threshold Exceeded?	No	**Yes**	No	**Yes**	**Yes**	No

lbs/day = pounds per day

As outlined by the SJVAPCD, an exceedance of the daily thresholds does not necessarily result in a significant impact; however, such an exceedance triggers the need for an ambient air quality impact assessment. If the sum of the modeled pollutant concentration and the corresponding background concentration of each pollutant exceeds the CAAQS and/or NAAQS (listed in Table 4) at the property boundaries, the Project could violate air quality standards and contribute substantially to an existing or projected air quality violation (SJVAPCD 2015a). Appendix AQGHG contains detailed calculations and a summary of the ambient air quality impact analysis undertaken to determine whether construction activities associated with the Project would cause or contribute to ambient air quality impacts. Table 10 shows the maximum concentration of each pollutant modeled at a property boundary receptor from the Project's construction activities in addition to the existing background concentration. As shown in Table 10, construction activities would not cause criteria pollutant concentrations of ROG, NO_X, SO_X, or CO at the Project's property line to exceed CAAQS or NAAQS. However, because the background concentration in the area for PM_{10} and $PM_{2.5}$ currently exceeds CAAQS and NAAQS, Project-related PM_{10} and $PM_{2.5}$ emissions from construction activities have the potential to contribute to the existing PM_{10} and $PM_{2.5}$ air quality violation and, per District Rule 2201, should be compared to the District recommended Significant Impact Level for each pollutant. As shown in Table 10, the maximum modeled concentrations of PM_{10} and $PM_{2.5}$ would not exceed the Significant Impact Level; therefore, Project construction would not contribute to a violation of an ambient air quality standard.

Table 10 Construction Ambient Air Quality Assessment

	Emissions					
	ROG (ppm)	NO_X (ppm)	SO_X (ppm)	CO (ppm)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)
Background Emissions[1]	0.04	0.02	<0.01	0.31	56.9	26.3
Maximum Modeled Concentration[2]	<0.01	<0.01	<0.01	<0.01	0.04	<0.01
Emissions Sum	0.04	0.02	<0.01	0.31	57.0	26.3
CAAQS[3]	0.09	0.180	0.25	9.0	20	12
Standard Exceeded?	No	No	No	No	**Yes**	**Yes**
NAAQS[3]	–	0.100	0.075	9.0	–	12
Standard Exceeded?	N/A	No	No	No	N/A	**Yes**
Maximum Modeled Concentration[2]	N/A	N/A	N/A	N/A	0.04	<0.01
Significant Impact Level	N/A	N/A	N/A	N/A	5	1.2
Significant Impact Level Exceeded?	N/A	N/A	N/A	N/A	No	No

N/A = not applicable

[1] Average background concentrations for each pollutant were obtained from CARB's Air Quality and Meteorological Information (AQMIS) system for Tulare County using daily data for 2018. In the absence of data from Tulare County, Kern County data or regional data from San Joaquin Valley Basin were used.

[2] For ROG, NO_x, SO_x, and CO, this is the maximum 1-hour modeled concentration at the property line. For PM_{10} and $PM_{2.5}$, this is the maximum period average modeled concentration at the property line. The averaging periods (i.e., maximum 1-hour average versus maximum period average) was selected to correspond with the available ambient air quality standards as recommended by SJVAPCD District Rule 2201 *AAQA Modeling*.

[3] The 1-hour standard CAAQS and NAAQS were used for ROG, NO_x, SO_x, and CO. In the absence of a 1-hour standard, such as for PM_{10} and $PM_{2.5}$, the annual average standard was used.

Health Impacts of CO

Exposure to high concentrations of CO can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. The Air Basin is currently an attainment area for CO; however, there is a potential for the formation of microscale CO "hotspots" to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and/or is operating on roadways crowded with non-Project traffic.

Construction traffic would primarily access the Project from Avenue 56, Road 236, and State Route 65. As detailed in the Noise Study for the Rexford Solar Project (Rincon Consultants 2019), during peak Project construction there would be an estimated 2,110 Project-related daily trips on SR 65, which would increase the daily traffic volume on SR 65 from 4,632 to 6,742 vehicles per day. Other local roads (Road 236 and Avenue 56) used during construction would experience a lower daily traffic volume of 1,975 to 2,109 vehicles per day. Even at the high end of the daily traffic volume (i.e., 6,742) vehicle trips could not result in a CO hotspot due to the small magnitude of emission sources and the low emission rates that occur due to catalytic converters. Additionally, the Project Site is located in a rural flat area where air dispersion is not impeded by buildings or nearby terrain; therefore, CO emissions generated would disperse rapidly and construction traffic would not generate CO hotpots.

Valley Fever

Construction activities that include ground disturbance can result in fugitive dust, which can cause fungus *Coccidioides* spores to become airborne if they are present in the soil. These spores can cause Valley Fever. Workers who disturb soil where fungal spores are found, whether by digging, operating earthmoving equipment, driving vehicles, or by working in dusty, wind-blown areas, are more likely to breathe in spores and become infected. It is not a contagious disease and secondary infections are rare. Construction activities associated with the Project would include ground-disturbing activities that could result in an increased potential for exposure of nearby residents and on-site workers to airborne spores, if they are present. Compliance with dust control measured required by SJVAPCD Rule 8021 (as detailed in Table 5) would minimize personnel and public exposure to Valley Fever and reduce the potential risk of nearby resident and on-site worker exposure to Valley Fever.

Naturally Occurring Asbestos

Naturally occurring asbestos can be found in serpentine rock, and its parent material, ultramafic rock. The rock types are abundant in the Sierra foothills and have been identified in Tulare County. As shown in Figure 7-2 of the Porterville Area Community Plan, the Project Site is not located in an area with ultramafic rocks, which are more likely to contain naturally occurring asbestos. Therefore, Project construction would have a low likelihood of disturbing naturally occurring asbestos.

Project Decommissioning

As stated in Section 1.4, *Operational Activities*, at the end of the Project's useful life (anticipated to be 30 to 40 years), the solar facility would be repowered or decommissioned. The PV arrays and supporting equipment largely sit on the surface of the land, and removal of the arrays would cause minimal alteration from its natural state, nor would extensive ground-disturbing activities be required. Any other activities required for deconstruction of the on-site facilities would require similar types and levels of equipment as those used during the construction phase. The Project would be required to comply with SJVAPCD Rule 8021, which requires implementation of dust control measures, and SJVAPCD Rule 9510, Indirect Source Review, which requires reduction of engine exhaust emissions of NO_X and PM_{10}. As such, decommissioning activities at the Project Site would not result in exceedances of SJVAPCD recommended thresholds or contribute to a violation of an ambient air quality standard.

The Project applicant would be required to develop a Decommissioning Plan for review and approval by the Tulare County Planning Division. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and be conducted in accordance with all applicable federal, state, and county regulations.

Construction Health Risk Assessment

As described in Section 1.3, *Construction Activities*, Project components at all parcels and the gen-tie corridor would be constructed over a period of 27 months. Construction of the Project would require use of heavy-duty construction equipment and diesel trucks which would emit DPM. As previously mentioned, construction and associated emissions related to the gen-tie are incorporated into the provided construction schedule and equipment mix. Figure 4 shows the receptor grids used to model health risk, the receptor grid point of maximum impact (PMI) off-site, and the maximum exposed individual resident (MEIR).

The worst-case scenario[5] where construction at all parcels and gen-tie corridor would occur simultaneously was assessed to provide the most conservative health risk assessment. The highest off-site modeled average DPM concentration of 3.92E-03 (approximately 0.004) micrograms per cubic meter (µg/m^3) and PMI within the receptor grids would occur along the property boundary of the westernmost parcel in the Project Area, approximately 1,000 feet north of Avenue 56. The Project MEIR was determined to be adjacent to the eastern edge of the Project Area boundary, at a rural residence across Road 240. DPM at the MEIR for the Project was estimated at 6.52E-04 (approximately 0.0007) µg/m^3. Refer to Figure 4 for the location of the PMI and MEIR in reference to the Project Area. The carcinogenic and chronic health risks at the PMI and MEIR are contained in Table 11 (refer to Appendix HRA for detailed health risk estimates). As shown therein, excess cancer risk and chronic risk associated with Project construction and decommissioning would not exceed the risk criteria at the receptor grid MEIR even if construction occurred at all parcels simultaneously.

Table 11 Health Risks Associated with Diesel Particulate Emissions during Construction and Decommissioning of Project

	Carcinogenic Risk by Age Group					Summed Lifetime		Chronic Risk Hazard Quotient
	3rd Trimester	0-2 Years	2-16 Years	16-30 Years	16-70 Years	30 Years	70 Years	
Construction Emissions (27 months)								
PMI[1]	4.54E-08	1.10E-06	2.14E-07	3.26E-08	2.82E-08	1.39E-06	1.38E-06	7.85E-04
MEIR	7.55E-09	1.82E-07	3.56E-08	5.41E-09	4.69E-09	2.31E-07	2.30E-07	1.30E-04
Risk Criteria			**2.00E-05**			**2.00E-05**		**1.0**
Exceed Criteria?	No	No	No	No	No	No	No	No
Construction and Deconstruction Emissions (54 months in a 70-year lifetime)								
PMI[1]	4.54E-08	1.10E-06	4.29E-07	6.51E-08	5.64E-08	1.64E-06	1.63E-06	7.85E-04
MEIR	7.55E-09	1.82E-07	7.12E-08	1.08E-08	9.37E-09	2.72E-07	2.70E-07	1.30E-04
Risk Criteria			**2.00E-05**			**2.00E-05**		**1.0**
Exceed Criteria?	No	No	No	No	No	No	No	No

[1] PMI represents the maximum risk of exposure off-site associated with the Project, but does not reflect risk at a sensitive receptor location.

Long-term Regional Impacts

Air Quality Management Plan Consistency

Construction, operation and maintenance, and decommissioning of the Project would result in emissions of criteria pollutants including ozone precursors, such as ROG and NO_X as well as particulate matter. The SJVAPCD has prepared several air quality attainment plans to achieve ozone and particulate matter standards, the most recent of which include the *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 PM_{10} Maintenance Plan and Request for Re-designation, 2012 $PM_{2.5}$ Plan,* and *2015 Plan for the 1997 $PM_{2.5}$ Standard*. The Air Basin is in attainment for CO, SO_2, and lead, so there are no attainment plans for those pollutants. The SJVAPCD has determined that projects with emissions

[5] Although construction may occur at some parcels simultaneously, not all parcels will undergo simultaneous construction. Assuming simultaneous construction of all parcels provides the worst possible scenario thus providing the most conservative health risk assessment.

above the thresholds of significance for criteria pollutants would conflict with/obstruct implementation of the SJVAPCD's air quality plan (SJVAPCD 2015a). As discussed under Construction Impacts, the ambient air quality impact assessment recommended by SJVAPCD in their GAMAQI indicates Project construction emissions would not contribute to a violation of an ambient air quality standard; therefore, Project construction would not conflict with implementation of existing air quality plans.

Operational Air Pollutant Emissions

Table 12 summarizes estimated emissions associated with operation of the Project. As discussed in Section 1.4, *Operational Activities*, the Project could require up to 20 full-time employees. It is possible that the Project would share an O&M, substation, and/or transmission facilities with one or more nearby solar projects. Sharing of personnel with nearby solar Projects could reduce the Project's on-site operational staff. However, it is conservatively assumed that the Project would require individual operations and maintenance staff. As shown in Table 12, operational emissions from the Project would not exceed SJVAPCD recommended daily or annual thresholds for any criteria pollutant. As shown in Table 12, Project operation would not generate emissions exceeding SJVAPCD's recommended 100 pounds per day screening threshold for any criteria pollutant; therefore, an AAQA is not required for operation activities.

Table 12 Estimated Operational Emissions

Emission Type	Source	Emissions					
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
Exhaust	On Road and On-Site Vehicles	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fugitive Dust	Maintenance Vehicles	–	–	–	–	1.7	0.2
Total (tons/year)		**<0.1**	**<0.1**	**<0.1**	**<0.1**	**1.7**	**0.2**
SJVAPCD Threshold		10	10	27	100	15	15
Exceed Threshold?		No	No	No	No	No	No
Total Daily Operations[1] (lbs/day)		**0.1**	**0.3**	**<0.1**	**0.2**	**14.2**	**1.4**
SJVAPCD Operational Threshold		100	100	100	100	100	100
Exceed Threshold?		No	No	No	No	No	No

Totals may not add up due to rounding. Subtotal equals the sum of all exhaust and fugitive dust emissions from on-road and on-site vehicles. See Appendix AQGHG for calculations. N/A = not applicable (e.g., no threshold)

[1]Annualized at 244 working days per year

Health Impacts of Operational TACs

As previously discussed, health impacts due to DPM are largely related to construction equipment exhaust. Because limited construction equipment would be in use during operational activities and the estimated PM_{10} emissions (i.e., DPM equivalent) related to exhaust emissions (Table 12) are minimal, Project Operation would not result in adverse health impacts.

Health Impacts of CO

As discussed in Section 1, *Project Description*, the Project would have a total of 20 full-time employees once operational. This number of employees would generate a negligible increase in traffic. Therefore, no CO hotspots would be created during Project operation.

Odors

Substantial objectionable odors are normally associated with agriculture, wastewater treatment, industrial uses, or landfills. The Project would involve the construction, operation and maintenance, and decommissioning of a solar energy facility and associated infrastructure that do not produce objectionable odors. Operation of the Project would not emit any odorous compounds.

Cumulative Impacts

The geographic scope considered for potential cumulative impacts to air quality is the Air Basin, which is governed by the SJVAPCD. The Air Basin currently is classified as non-attainment for the one-hour state ozone standard as well as for the federal and state eight-hour ozone standards. Additionally, the Air Basin is classified as non-attainment for the state 24-hour and annual arithmetic mean PM_{10} standards and the state annual arithmetic mean and national 24-hour $PM_{2.5}$ standards (SJVAPCD 2018a). Therefore, there is an existing adverse cumulative effect in the Air Basin relative to these pollutants.

The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. While the Project would contribute to an increase in NO_X, $PM_{2.5}$, and PM_{10}, with implementation of dust control and exhaust emission reduction measures required by SJVAPCD Rule 8021 and 9510, the Project's incremental contribution to the cumulative effect would not be considered cumulatively considerable. Additionally, as discussed above, the Project would not conflict with or obstruct implementation of the SJVAPCD's air quality plan. Therefore, Project construction and decommissioning, and operations and maintenance, would not result in a cumulatively considerable increase in emissions of nonattainment pollutants.

Construction and decommissioning-related traffic is not anticipated to create a CO hotspot, as construction would be short-term and existing traffic volumes are low. Therefore, the project would not adversely affect sensitive receptors with regard to potential CO hotspots resulting from the Project's contribution to cumulative traffic-related air quality impacts.

3 Greenhouse Gases

3.1 Background

This section analyzes GHG emissions associated with the Project and potential impacts related to climate change.

3.1.1 Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (USEPA 2018). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2007).

3.1.2 Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigatonne) CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, carbon dioxide was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases accounted for 6 percent and 2 percent respectively (IPCC 2014).

Federal Emissions Inventory

Total United States GHG emissions were 6,511.3 million metric tons (MMT or gigatonnes) of CO_2e in 2016 (USEPA 2018). Total United States emissions have increased by 2.4 percent since 1990; emissions decreased by 1.9 percent from 2015 to 2016 (USEPA 2018). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas and other non-fossil energy sources in the electric power sector and (2) warmer winter conditions in 2016 resulting in a decreased demand for heating fuel in the residential and commercial sectors (USEPA 2018). Since 1990, U.S. emissions have increased at an average annual rate of 0.1 percent. In 2015,

the industrial and transportation end-use sectors accounted for 29 percent each of GHG emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 15 percent and 16 percent of CO_2e emissions, respectively (USEPA 2018).

California Emissions Inventory

Based on the California Air Resource Board's (CARB) California Greenhouse Gas Inventory for 2000-2016, California produced 429.4 MMT of CO_2e in 2016 (CARB 2018a). The major source of GHGs in California is associated with transportation, contributing 41 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 23 percent of the state's GHG emissions, and electric power accounted for approximately 16 percent (CARB 2018a). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. CARB has projected that statewide unregulated GHG emissions for the year 2020 will be 509 MMT of CO_2e (CARB 2018b). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

3.1.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature (GMST) for the decade from 2006 to 2015 was approximately 0.87°C (0.75°C to 0.99°C) higher than the average GMST over the period from 1850 to 1900. Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014 and 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snow pack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state as well as regionally-specific climate change case studies (State of California 2018). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have been occurring at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality would worsen. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Natural Resources Agency 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. However, the average early spring snowpack in the western United States, including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 5.9 inches along the central and southern California coast (State of California 2018). The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state’s wet winters and releasing it slowly during the state’s dry springs and summers. A warmer climate is predicted to reduce the fraction of precipitation falling as snow and result in less snowfall at lower elevations, thereby reducing the total snowpack (DWR 2008; State of California 2018). The State of California projects that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Climate change has the potential to induce substantial sea level rise in the coming century (State of California 2018). The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, global mean sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea–level rise of 10 to 37 inches by 2100 (IPCC 2018). A rise in sea levels could completely erode 31 to 67 percent of

southern California beaches, result in flooding of approximately 370 miles of coastal highways during 100-year storm events, jeopardize California's water supply due to salt water intrusion, and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2018). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent; water demand could increase as hotter conditions lead to the loss of soil moisture; crop-yield could be threatened by water-induced stress and extreme heat waves; and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the annual average maximum daily temperatures in California could rise by 4.4 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century (State of California 2018). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals related to (1) timing of ecological events; (2) geographic distribution and range; (3) species' composition and the incidence of nonnative species within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018).

3.1.4 Regulatory Setting

Federal Regulations

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. In 2012, the USEPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that USEPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that

are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

California Regulations

California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, USEPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Natural Resources Agency (Resources Agency) adopted amendments to the State CEQA

Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with statewide per capita goals of six metric tons (MT) CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable

energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Local Regulations

Tulare County has established a series of goals, policies, and implementation measures in the Tulare County General Plan 2030 Air Quality Element to reduce GHG emissions (Tulare County 2012). GHG-related goals include:

> **AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan**: The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.
>
> 1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
> 2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and 3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

Implementation measures include:

- **16.** The County shall develop and maintain a climate action plan. The climate action plan shall include the following elements: an emissions inventory, emission reduction targets, applicable greenhouse gas control measures, and monitoring and reporting plan.

In 2012, the County of Tulare adopted a Climate Action Plan in conjunction with the General Plan Update, and in 2017, adopted a Dairy and Feedlot Climate Action Plan (County of Tulare 2012b; 2017). The Dairy and Feedlot Climate Action Plan does not include policies or actions relevant to the Project. Policies that are relevant from the Climate Action Plan, include:

- **ERM-4.6 Renewable Energy**. The County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind and solar, biofuels and co-generation.
- **AG-2.11 Energy Production**. The County shall encourage and support the development of new agricultural related industries featuring alternative energy (e.g., ethanol), utilization of agricultural waste, and solar or wind farms.

3.2 Greenhouse Gas Impact Analysis

3.2.1 Methodology and Significance Thresholds

a. Methodology

Construction and Operational Emissions

Construction of the Project would generate temporary GHG emissions primarily from the use of on-site construction equipment, vehicles transporting construction workers to and from the Project Site, and heavy-duty trucks used to export earth materials off-site. Site preparation and grading typically generate the greatest amount of emissions from grading equipment and soil hauling. Operational activities of the Project would generate GHG emissions primarily from operation of maintenance equipment on-site and vehicles transporting employees to and from the Project Site. Emissions associated with decommissioning the Project were conservatively assumed to be equivalent to construction of the Project given the type of equipment required for decommissioning. The analysis relied on CARB's on-road vehicle emission factor model (EMFAC2017)[2], CARB's 2017 Off-Road Equipment Inventory Model (OFFROAD2017), and emission factors obtained from the USEPA AP-42 *Compilation of Air Pollutant Emissions Factors* (as amended). Short-term and annual Project emissions were estimated based on equipment and construction schedule assumptions developed from similar solar Projects and using appropriate emission factors. The Association of Environmental Professionals (AEP) recommends amortizing total construction GHG emissions resulting from a Project over the Project's estimated lifetime and added to GHG emissions (AEP 2010). As discussed in Section 1.4, *Operational Activities*, up to 20 employees may be required during scheduled operation and maintenance activities. However, it is possible that the Project would share personnel with nearby solar facilities thus reducing the Project's on-site operational staff. To provide a conservative estimate, off-site emissions were based on the maximum number of employees that would be traveling to the site in a single day to perform maintenance activities if the Project required its own personnel (i.e., 20 total employees). Refer to Section 1, *Project Description*, and Appendix AQGHG for details on equipment fleet, hours of operation, vehicle miles traveled, and other assumptions used in this analysis.

Indirect GHG Emissions Associated with Water Use

The use of water in California can involve substantial energy consumption, depending on the source of the water and the use location relative to the source. Major portions of the state rely on imported water from the State Water Project (California Aqueduct), the Central Valley Project, the Colorado River Aqueduct, the All-American Canal, and similar large-scale water distribution systems. Moving water across the state involves considerable energy consumption for pumping and delivering the water to the use location. The use of groundwater can involve substantial energy consumption to pump water from deep aquifers. In addition to the energy consumption associated with wholesale water supply, energy is consumed during local treatment for potable use and for local delivery. Most of the energy associated

with water supply is provided by electricity, which is generated from a variety of sources, including fossil-fueled power plants that produce GHGs. Consequentially, the use of water for dust control and grading compaction during construction and photovoltaic panel washing during operations results in indirect GHG emissions.

As described in Section 1, *Project Description*, the Project may require water during construction for dust suppression. During operation the Project would require water for solar PV panel washing and facilities at the O&M buildings. Based on the energy factors in CPUC's *Embedded Energy in Water Studies* (CPUC 2010) and assuming minimal treatment and delivery, it was estimated that each acre-foot of water requires 650 kilowatt-hours of electricity for Project Site delivery. The quantity of GHG emissions associated with the 650 kilowatt-hours was based on the emissions profile for Pacific Gas and Electric (PG&E) provided in the California Emissions Estimator Model (CalEEMod; CAPCOA 2017).

Displaced Emissions

Operation of the Project would create renewable energy over the planned 30- to 40-year Project lifetime. This energy would displace GHG emissions that would otherwise be produced by existing power generation resources, including coal and natural gas/other non-renewables. The Project has the capacity to generate approximately 700 MW of electricity at peak sun exposure. Annual energy generation was estimated based on solar radiation at the Project Site and annual operational time.[6] Refer to Appendix AQGHG for detailed calculations related to the Project's annual energy generation and associated displacement of emissions. The Project is assumed to displace a fraction of existing current annual power generated by fossil-fuels. Displaced GHG emissions were estimated assuming that generated solar energy would displace energy generated from fossil fuels in the California market and does not include the approximate 30 percent of the California electricity generated by non-combustion sources (California Energy Commission 2018a).

b. Significance Thresholds

Based on the *CEQA Guidelines*, the Project would have a significant impact if it would:

a. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

[6] Photovoltaic cell capacity is rated in terms of mega or kilowatts and indicates the amount of instantaneous power produced when operating at peak sun exposure. Total amount of electricity produced in measured in watt-hours and is dependent on operational time. Operational time of a solar panel is defined by the amount of time that the photovoltaic cells are actively converting solar energy into power, which depends on solar radiation. Solar radiation is the measure of energy emitted from the sun and varies daily depending on the time of day, season, local landscape, and geography.

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, consistency with a regional GHG reduction plan, or consistency with statewide regulations adopted to reduce GHG emissions. A project may not have an impact related to GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (14 Cal. Code Regs. §15064[h][3]). According to the CEQA Guidelines, projects can tier off of a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. The AEP considers this approach in its white paper, "Beyond Newhall and 2020," to be the most defensible approach presently available to determine the significance of a Project's GHG emissions (AEP 2010).

Tulare County has not developed a quantified threshold of significance for GHG emissions, but a Project found to contribute to a net decrease in GHG emissions and found to be consistent with the adopted Tulare County Climate Action Plan and CARB 2017 Scoping Plan is presumed to have a less than significant GHG impact.

3.2.2 Project Impacts

GHG Emissions

The Project would generate GHG emissions directly and indirectly during construction, routine operational and maintenance activities, and decommissioning activities. The majority of emissions from the Project would be generated during construction and decommissioning activities. Table 13 presents total estimated emissions from construction activities from on-site and off-site emission sources. The estimated total GHG emissions during Project construction would be approximately 4,855 MT CO_2e over the 27-month construction period. It was conservatively assumed that decommissioning of the Project would use the same type and amount of equipment in a similar schedule to construction, therefore decommissioning of the Project was estimated to generate an equivalent amount of emissions as construction. This is a conservative estimate because on-road vehicles and off-site equipment would continue to improve in fuel efficiency resulting in reduced emissions over time, as such decommissioning emissions in 30 years[7] would likely be substantially lower than construction emissions. Estimated construction and decommissioning emissions related to the Project amortized over 30 years, the anticipated Project lifetime, would be approximately 324 MT CO_2e per year. Additional details on calculations can be found in Appendix AQGHG.

[7] Although the Project would be constructed to last up to 40 years, the Project construction-generated emissions were amortized over 30 years to provide a conservative estimate.

Table 13 Estimated Construction Emissions of Greenhouse Gases

Year	Location	Emissions Source (MT CO_2e)				Total (MT CO_2e)
		Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	
2021		363	<0.1	36	8	408
2022		2,064	0.2	375	34	2,473
2023		1,602	0.2	337	34	1,973
Total Construction		**4,030**	**0.5**	**749**	**76**	**4,855**
Total Decommissioning		**4,030**	**0.5**	**749**	**76**	**4,855**
Construction and Decommissioning		**8,059**	**1.0**	**1,498**	**152**	**9,709**
Amortized Emissions (30-year life)		269	<0.1	50	5	324

Note: Numbers have been rounded to nearest metric tons

Table 14 summarizes operational emissions associated with the Project. Operation and maintenance of the Project would generate GHG emissions largely through motor vehicle trips to and from the Project Site; on-site maintenance activities involving portable equipment and maintenance vehicles; and energy use associated with water consumption. As shown in Table 14, the Project would emit an estimated 16 MT CO_2e per year during operation. The total construction and decommissioning GHG emissions, amortized over 30 years, was added to the annual estimated operational emissions to estimate annual GHG emissions generated by the Project. As shown in Table 14, the Project would emit an average of 340 MT CO_2e per year over the operational life of the Project (assumed 30 years).

Construction and operation of new renewable energy facilities would offset GHG emissions by replacing energy generated by fossil-fueled power plants. The Project would generate approximately 1,566 gigawatt-hours (GWh) of solar-generated electricity each year that would be added to the power grid and be used in place of electricity generated by fossil-fuel sources. Based on the Project's projected annual electricity generation and the GHG emissions generated due to fossil-fuel combustion to generate the same level of electricity, the Project has the potential to displace 337,071 MT CO_2e per year. Therefore, the net generation of annual GHG emissions would be -336,731 MT CO_2e, as shown in Table 14. As such, the Project would result in an overall lifetime reduction estimated at 10,101,915 (i.e., 336,731 * 30 yrs = 10,101,915) MT CO_2e and would therefore be regionally beneficial. The Project would not result in an increase in GHG emissions over its 30-year life and would be consistent with state GHG reduction plans such as AB 32 and SB 32.

Table 14 Estimated Annual Operational Greenhouse Gas Emissions

Location	Emissions Source (MT CO_2e)				Total (MT CO_2e)
	Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	
Operation	<0.1	<0.1	6	9	16
Amortized Construction and Decommissioning Emissions	269	<0.1	50	5	324
Annual Total	**269**	**<0.1**	**56**	**15**	**340**
Annual Displaced GHG Emissions (MT/year)					**337,071**
Net Annual GHG Emissions (MT/year)					**-336,731**

Note: Numbers have been rounded to nearest metric tons

The proposed on-site substations may feature circuit breakers that contain SF_6 gas, used as an insulator and an arc suppressor in the breakers. SF_6 is inert and non-toxic and is encapsulated in the breaker assembly. SF_6 is a GHG with substantial global warming potential because of its chemical nature and long residency time within the atmosphere. However, under normal conditions, it would be completely contained in the equipment and SF_6 would be released only in the unlikely event of a failure, leak, or crack in the circuit breaker housing. New circuit breaker designs have been developed to minimize the potential for leakage, compared to that of past designs, and the amount of SF_6 that could be released by the solar facility equipment would be minimal.

Consistency with GHG Reduction Plans and Policies

As discussed in Section 3.1.1, *Regulatory Setting*, SB 100 accelerated the state's RPS Program by increasing California's procurement of electricity from renewable sources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. The Project would generate approximately 1,566 GWh of electricity each year or approximately 46,986 GWh over the Project's 30-year lifetime. This additional solar-generated energy would be added to the power grid and used in place of electricity generated by fossil-fuel sources and, thus would directly support energy goals under SB 100 and the 2017 Scoping Plan Update. Replacement of fossil-fuel sources with renewable solar energy would also displace GHG emissions, ultimately off-setting any GHG emissions produced by construction, decommissioning, and operation of the Project. Additionally, the Project would be consistent with the County's Climate Action Plan goal to encourage renewable energy, including solar facilities (County of Tulare 2012b). Therefore, the Project would be consistent with state and regional plans to reduce GHG emissions.

4 Conclusions

4.1 Air Quality

As discussed in Section 2.2, *Air Quality Impact Analysis*, the ambient air quality impact assessment recommended by SJVAPCD in their GAMAQI indicates neither Project construction nor decommissioning emissions would contribute to a violation of an ambient air quality standard with implementation of dust control measures required by SJVAPCD Rule 8021 and engine exhaust emission reduction required by Rule 9510; therefore, Project construction and decommissioning would not conflict with implementation of existing air quality plans. Moreover, Project construction and decommissioning would not result in health risk impacts exceeding SJVAPCD recommended thresholds, or impacts related to valley fever, CO hotspots, or naturally occurring asbestos. Furthermore, the Project would not result in adverse long-term regional impacts from Project operation.

4.2 GHG

As discussed in Section 3.2, *Greenhouse Gas Impact Analysis*, the Project would result in a net reduction in GHG emissions over the life of the Project and is consistent with applicable GHG reduction plans, the 2017 Scoping Plan and County of Tulare Climate Action Plan. As a renewable solar energy project, the Project would reduce the local, regional, and statewide cumulative GHG emissions and offset a portion of the incremental cumulative GHG impacts of other projects.

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Appendix AQGHG

Bulk Emissions Calculations and Ambient Air Quality Analysis Data

Construction Schedule

Start Date	Oct 1, 2021

Month				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Description	# Work Days (Eland)	# Work Days (Rexford)	# Work Days (Rexford)	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23	Oct '23	Nov '23	Dec '23
Site preparation & Grading	84	114	114																											
Tracker Foundations (Piles)	125	175	175																											
Underground Cabling	125	175	175																											
Mechanical Installation	146	204	204																											
Electrical Installation	167	234	234																											

*Eland 1 had 5 CUPs (2,653 acres) for 500 MW solar farm and would be built in 12 months
*Rexford will have 42 parcels (3,620 acres) for 700 MW solar farm and estimated to take 12 -30 months
*Rexford schedule scaled up from Eland 1 Solar Project based on following assumptions: site prep and grading scaled up due to increase in acreage (136%); tracker foundation, underground cabling, mechanical installation and electical installation scaled up due to increase in solar farm capability (140%)

	First Year (2021)				Second Year (2022)				Third Year (2023)				Total	Days	Weeks	Months	Phase
Phase	Months	Weeks	Days	%	Months	Weeks	Days	%	Months	Weeks	Days	%	Months				Total
1	3	12.9	65	56%	2.3	9.948	50	44%	0.0	0	0	0%	5.31	516	103.2	24	1
2	1	4.3	22	12%	7.1	30.7	154	88%	0.0	0	0	0%	8.1	175	35	8.14	2
3	0	0	0	0%	8.1	35	175	100%	0.0	0	0	0%	8.1	175	35	8.14	3
4	0	0	0	0%	4.0	17.2	86	42%	5.5	23.68	118	58%	9.5	204	40.88	9.507	4
5	0	0	0	0%	0.0	0	0	0%	10.9	46.76	234	100%	10.9	234	46.76	10.87	5

Traffic Schedule during Construction

	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23	Oct '23	Nov '23	Dec '23

Heavy Vehicle ADT by Phase

Activity	Description	Work days	ADT	ADT by Month																										
				1	2	**3**	4						10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Site Preparation	88	25	25	25	25	25	25																						
2	Grading and Earthwork	122	25		25	25	25	25	25	25																				
3,4,5	Foundations, Steel, Electrical	519	55			55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
6	Collector Line Installation	56	15																						15	15	15	15	15	15
Total				**25**	**50**	**105**	**105**	**105**	**80**	**80**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**70**	**70**	**70**	**70**	**70**	**70**
Average Daily Trip Generation		**2.97**																												

Passenger Vehicle ADT by Phase

Activity	Description	Work days	ADT	ADT by Month																										
				1	2	**3**	4						10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	Site Preparation	88	100	100	100	100	100	100																						
2	Grading and Earthwork	122	400		400	400	400	400	400	400																				
3,4,5	Foundations, Steel, Electrical	519	1000			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
6	Collector Line Installation	56	75																						75	75	75	75	75	75
Total				**100**	**500**	**1500**	**1500**	**1500**	**1400**	**1400**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1075**	**1075**	**1075**	**1075**	**1075**	**1075**
Average Daily Trip Generation		**48.69**																												

Notes:
1. Daily construction trip generation by activity was based on Traffic data for Aratina provided by EPD Solutions, Inc. the traffic consultants on April 22, 2019.
2. Rexford traffic schedule based on activity was scaled to match the proposed construction schedule based on phase descriptions (Activity 1 & 2 are assumed to be equivalent to construction phase 1; activity 3,4,5 are assumed to include construction phase 2,3,4,5). Activity 6 "Collector Line Installation" was not discussed in the construction schedule therefore assumptions for this activity are based on Eland EIR Traffic Analysis but scaled up based on acreage.
3. Daily ADT is by activity per year is as follows: 2021 = 65 days from Activity 1, 43 days from Activity 2, 2 days from Activity 3,4,5; 2022 = 24 days from Activity 1, 79 days from Activity 2, 258 days from Activity 3,4,5; 2023 = 258 days from Activity 3,4,5 and 56 days from Activity 6

Acreage	%	Employee Trip Generation Rate	Vendor Trip Generation Rate	Vendor Trip Generation Rate (T6)	Vendor Trip Generation Rate (T7)
3620	100.00%	48.69186047	2.965116279	0.988372093	1.976744186
Total	**3620**	**100.0%**	**48.69**	**2.97**	**0.99**	**1.98**

Note:
1. It is assumed that 1/3 of the vendor trips are done by T6 trucks and 2/3 by T7 trucks; assumption is the same as used in Eland 1 Solar Project.
2. Average daily trip rates were calculated following methodology used in the Eland 1 EIR where monthly trips were summarized for the entirety of the construction and divided by the total number of work days (approximately 322days for 2021 and 2022). Trips were apportioned to each CUP based on % each CUP acreage made up of entire project acreage.

Days by Activity per Year

	First Year (2021)				Second Year (2022)				Third Year (2023)				Total
Activity	Months	Weeks	Days	%	Months	Weeks	Days	%	Months	Weeks	Days	%	Months
1	3	12.9	65	73%	1.1	4.78	24	27%	0	0	0	0%	4.1
2	2	8.6	43	35%	3.7	15.88	79	65%	0	0	0	0%	5.7
3,4,5	0.1	0.43	2	0%	12	51.6	258	50%	12.0	51.67	258	50%	24.1
6	0	0	0	0%	0.0	0	0	0%	2.6	11.2	56	100%	2.6

Rexford Solar Project - 700 MW

Emissions Factors Used in Analysis

Exhaust Emissions Factors for Equipment in Mojave Desert Air Basin

Equipment [1, 2, 3]	Fuel Type	Consumption (gallons/hr)	Actual HP	Modeled HP	HC lbs/hr	ROG lbs/hr	TOG lbs/hr	CO lbs/hr	NOx lbs/hr	CO_2 lbs/hr	PM_{10} lbs/hr	$PM_{2.5}$ lbs/hr	otal PM lbs	SO_X lbs/hr	NH_3 lbs/hr
Air Compressor	diesel	1.02E+00	78	50	2.39E-02	2.84E-02	3.44E-02	1.96E-01	1.65E-01	2.22E+01	8.22E-03	7.57E-03	8.22E-03	2.87E-04	1.88E-04
Crane	diesel	2.74E+00	231	237.5	3.97E-02	4.81E-02	5.72E-02	2.87E-01	5.32E-01	6.16E+01	2.47E-02	2.27E-02	2.47E-02	5.68E-04	5.03E-04
Crawler Tractor	diesel	3.31E+00	212	175	5.10E-02	6.17E-02	7.35E-02	4.68E-01	6.22E-01	7.45E+01	3.47E-02	3.19E-02	3.47E-02	6.87E-04	6.08E-04
Drum Roller Compactor	diesel	2.24E+00	134	137.5	1.97E-02	2.39E-02	2.84E-02	2.99E-01	2.53E-01	5.04E+01	1.35E-02	1.24E-02	1.35E-02	4.66E-04	4.11E-04
Excavator	diesel	2.89E+00	212	175	2.22E-02	2.68E-02	3.19E-02	3.80E-01	2.52E-01	6.49E+01	1.22E-02	1.13E-02	1.22E-02	6.00E-04	5.30E-04
Generator Set	diesel	1.02E+00	84	75	1.42E-02	1.72E-02	2.04E-02	1.72E-01	1.55E-01	2.30E+01	7.91E-03	7.28E-03	7.91E-03	2.13E-04	1.88E-04
Grader	diesel	3.15E+00	187	175	5.48E-02	6.64E-02	7.90E-02	4.71E-01	6.36E-01	7.08E+01	3.55E-02	3.26E-02	3.55E-02	6.53E-04	5.78E-04
Off-highway Truck	diesel	5.79E+00	402	450	4.79E-02	5.80E-02	6.90E-02	3.35E-01	5.02E-01	1.30E+02	1.89E-02	1.74E-02	1.89E-02	1.20E-03	1.06E-03
Other Construction Equipment	diesel	3.26E+00	172	175	3.82E-02	4.62E-02	5.50E-02	4.45E-01	4.82E-01	7.33E+01	2.52E-02	2.32E-02	2.52E-02	6.77E-04	5.98E-04
Rough-terrain Forklift	diesel	2.30E+00	100/130	137.5	1.79E-02	2.16E-02	2.57E-02	3.05E-01	2.30E-01	5.17E+01	1.22E-02	1.13E-02	1.22E-02	4.77E-04	4.22E-04
Rubber-tired Loader	diesel	2.80E+00	203	175	3.42E-02	4.14E-02	4.93E-02	4.01E-01	3.73E-01	6.30E+01	2.04E-02	1.88E-02	2.04E-02	5.82E-04	5.15E-04
Skid Steer	diesel	1.34E+00	75	75	8.40E-03	1.02E-02	1.21E-02	1.87E-01	1.35E-01	3.02E+01	5.41E-03	4.97E-03	5.41E-03	2.79E-04	2.47E-04
Trencher (big)	diesel	5.94E+00	300	300	6.70E-02	8.11E-02	9.66E-02	3.98E-01	9.79E-01	1.34E+02	3.89E-02	3.58E-02	3.89E-02	1.23E-03	1.09E-03
Trencher (small)	diesel	1.84E+00	78	75	5.49E-02	6.64E-02	7.91E-02	3.42E-01	5.58E-01	4.15E+01	3.77E-02	3.46E-02	3.77E-02	3.82E-04	3.38E-04
Vibratory Post Driver	diesel	3.26E+00	158	175	3.82E-02	4.62E-02	5.50E-02	4.45E-01	4.82E-01	7.33E+01	2.52E-02	2.32E-02	2.52E-02	6.77E-04	5.98E-04

1. Emissions factors for diesel and gasoline equip developed from the CARB 2017 Off-Road Inventory Model for year 2021. Horsepower ratings rounded up to next highest category to provide a conservative estimate of total emissions. Note that emission factors from the 2017 Inventory Model are substantially lower than in the previous OFFROAD2011 model because of changed assumptions by CARB regarding load factors, hours of use, fuel consumption, and equipment population.

2. "Other Construction Equipment" used for vibratory post driver.

On-Road Mobile Vehicle Emission Factors Used in Analysis

Source: San Joaquin Valley APCD Region, EMFAC 2017 Annual Average, Year 2021

Running Emissions, grams/mile

Vehicle Type	Fuel Consumption (gallons/miles)	Speed	ROG	TOG	CO	NO_X	CO_2	CH_4	PM_{10} (g/mile)			$PM_{2.5}$ * (g/mile)			N_2O	SO_X
									Exhaust	Tire Wear	Brake	Exhaust	Tire Wear	Brake		
LDA, gas	0.66637	10	0.000	0.000	0.002	0.000	0.894	0.000	0.000	0.008	0.037	0.000	0.002	0.01575	0.00001	0.00271
LDA, gas	0.00471	55	0.002	0.003	0.148	0.010	63.463	0.001	0.000	0.008	0.037	0.000	0.002	0.016	0.00111	0.00271
LDT2, gas	2.09846	10	0.000	0.000	0.001	0.000	0.365	0.000	0.000	0.008	0.037	0.000	0.002	0.01575	0.00001	0.00349
LDT2, gas	0.01482	55	0.002	0.002	0.085	0.010	25.892	0.000	0.000	0.008	0.037	0.000	0.002	0.016	0.00069	0.00349
LHD2, gas	0.41797	10	0.000	0.000	0.004	0.001	4.754	0.000	0.000	0.008	0.089	0.000	0.002	0.038	0.00007	0.01169
LHD2, gas	0.84560	55	0.000	0.000	0.001	0.000	1.169	0.000	0.000	0.008	0.089	0.000	0.002	0.038	0.00002	0.01169
MHDT, gas	1.10729	10	0.000	0.001	0.005	0.001	3.214	0.000	0.000	0.012	0.130	0.000	0.003	0.056	0.00005	0.01767
MHDT, gas	0.37353	55	0.000	0.000	0.008	0.002	4.738	0.000	0.000	0.012	0.130	0.000	0.003	0.056	0.00009	0.01767
MDV, gas	1.94613	10	0.000	0.000	0.002	0.000	0.493	0.000	0.000	0.008	0.037	0.000	0.002	0.01575	0.00001	0.00436
MDV, gas	0.01374	55	0.002	0.003	0.104	0.012	34.906	0.000	0.000	0.008	0.037	0.000	0.002	0.016	0.00087	0.00436
LHDT2, dsl	0.20327	10	0.003	0.004	0.013	0.012	6.430	0.000	0.000	0.012	0.089	0.000	0.003	0.03822	0.00101	0.00610
LHDT2, dsl	0.13033	55	0.001	0.001	0.004	0.025	4.548	0.000	0.000	0.012	0.089	0.000	0.003	0.038	0.00071	0.00610
MHDT, dsl	0.07869	10	0.016	0.018	0.028	0.114	28.918	0.001	0.002	0.012	0.130	0.002	0.003	0.05586	0.00455	0.01051
MHDT, dsl	0.02323	55	0.005	0.005	0.019	0.118	41.375	0.000	0.005	0.012	0.130	0.004	0.003	0.056	0.00650	0.01051
HHDT, dsl	0.05520	10	0.014	0.015	0.045	0.241	61.533	0.001	0.002	0.036	0.061	0.001	0.008947	0.026304	0.00967	0.01370
HHDT, dsl	0.01407	55	0.005	0.006	0.022	0.208	96.144	0.000	0.004	0.036	0.061	0.004	0.009	0.026	0.01511	0.01370

Start Emissions, grams/trip

Vehicle Type	ROG	TOG	CO	NO_X	CO_2	CH_4	PM_{10}	$PM_{2.5}$	SO_X	N_2O
LDA, gas	0.266	0.291	2.327	0.210	57.271	0.059	0.002	0.002	0.0006	0.0279
LDT2, gas	0.448	0.490	3.062	0.394	76.059	0.091	0.002	0.002	0.0008	0.0384
MHDT, gas	0.241	0.264	5.474	0.375	40.826	0.042	0.001	0.001	0.0004	0.0267
LHD2, gas	0.146	0.160	1.836	0.592	22.007	0.029	0.000	0.000	0.0002	0.0434
MDV, gas	0.562	0.615	3.821	0.482	95.415	0.109	0.002	0.002	0.0009	0.0428
HHDT, gsl	0.002	0.002	2.984	3.220	44.000	0.000	0.002	0.002	0.0004	0.0529
LDA, dsl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
LDT2, dsl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
MHDT, dsl	0.000	0.000	0.000	1.369	0.000	0.000	0.000	0.000	0.0000	0.0000
LHD2, dsl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
MDV, dsl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
HHDT, dsl	0.000	0.000	0.000	1.890	0.000	0.000	0.000	0.000	0.0000	0.0000

Additional ROG Emissions

Vehicle Type	Diurnal (g/vehicle/day)	Hot Soak (g/trip)	ıg Losses (g/vehicle/day)[1]
LDA, gas	0.376	0.122	0.269
LDT2, gas	0.698	0.202	0.503
MHDT, gas	0.109	0.137	0.042
LHD2, gas	0.083	0.151	0.034
MDV, gas	0.712	0.215	0.558
HHDT, gas	0.243	0.331	0.118
LDA, dsl	0.000	0.000	0.000
LDT2, dsl	0.000	0.000	0.000
MHDT, dsl	0.000	0.000	0.000
LHD2, dsl	0.000	0.000	0.000
MDV, dsl	0.000	0.000	0.000
HHDT, dsl	0.0	0.0	0.0

Note: Diesel engines do not have additional start or ROG emissions.

[1] Diurnal/resting losses have to do with the vehicle population on site as it "rests"

Additional Greenhouse Gas Emissions Factors

GHG Emission Factors (grams/mile) [1,2]

Vehicle Type	CH_4	N_2O
MDV & HDD, dsl	0.0051	0.0048
LDT2, dsl	0.0009	0.0014
MDV & HDD, gas	0.0303	0.032
LDT2, gas	0.0148	0.0157
LDA, gas	0.0105	0.015

1. GHG Emissions Source: The 2018 Climate Registry Default Emission Factors, May 2018

2. EF based on "Low Emission Vehicles" category for gasoline vehicles and "Moderate" control for diesel run vehicles; this reflects CARB LEV regulations and requirement to replace truck engines with newer 2010 engine by 2023 (EMFAC2014 Volume 3 technical documentation)

GHG Global Warming Potential [1,2]

CO_2:	1 GWP
CH_4:	28 GWP
N_2O:	265 GWP

Note: 1 ton (short, US) = 0.90718474 metric ton.

1. Based on 100 Yr GWP from IPCC Fifth Assessment, 2016.

.2. No climate-carbon feedbacks (CC fb) included

Indirect Water Supply GHG Emissions

State Water Project/ Central Valley Proj	428	kwh/acre foot [1]
Local Supply (Groundwater)	906-1,990	kwh/million gallons [2]
Local Treatment	44	kwh/millions gallons
Local Delivery	45-956	kwh/million gallons [4]
Factor used:	***1993***	***kwh/MG*** [5]
	649	***kwh/AF***

Note: 1 million gallons (MG) = 3.07 acre feet (AF)

1. Embedded Energy in Water Studies, 2010a: Study 1, Figure 3.4: Dos Amigos Pumping Plant. (p.62-63)

2. Embedded Energy in Water Studies, 2010b:Study 2, Table 4-6: Central Valley energy intensity range for groundwater (main water supply)

3. Embedded Energy in Water Studies, 2010b:Study 2, Table 4-6: Lowest Statewide energy intensity value used because no Central Valley specific values, but minimal treatment of water observed in Central Valley agencies

4. Embedded Energy in Water Studies, 2010b:Study 2, Table 4-6: Statewide energy intensity values assuming booster pump use on moderate terrain

5 Energy intensity (EI) value used for analysis = the average supply EI + minimal water treatment EI + average local delivery EI

Pacific Gas & Electric Electricity Generation [1]

CO_2:	641.345	lbs/MWH
CH_4:	0.029	lbs/MWH
N_2O:	0.00617	lbs/MWH
	0.000292018	MT/kwh

Indirect GHG Factor: *0.190 MT/Acre Foot*

Note: 1 Metric Tons (MT) = 2204.62 lbs

1. California Emissions Estimator Model, CAPCOA 2017

Paved roads - Emission Factor Derivation Table

$$E_{ext} = [\, k\,(sL)^{0.91} \times (W)^{1.02}\,]\,(1 - P/4N)$$

where:
E=particulate emissions factor (lb/VMT)
k = particle size multiplier
sL = road surface silt loading (g/m^2)
W = average vehicle weight class (tons)
P = # of "wet" days with at least 0.01 inch of precipitation
N = # of days in averaging period (default 365 for annual)

				On-Site Vehicles[6]	
Parameter	**Unit**	**PM10**	**PM2.5**	**PM10**	**PM2.5**
Mean Vehicle Weight[1]	tons	2.4	2.4	10	10
k factor[2]	lb/VMT	0.0022	0.00054	0.0022	0.00054
Silt Loading, sL[3]	g/m^2	0.1888	0.1888	0.1888	0.1888
precipitation, P[4]	days	40	40	40	40
Averaging period, N[5]	days	365	365	365	365
Uncontrolled Emission factor, E	**lb/VMT**	**0.00114640**	**0.00028**	**0.00491**	**0.00121**

Notes:

1. Assumption based on the mix of all vehicles (not just project vehicles) driving on paved roads to site. CA Statewide MVW = 2.4 tons (CARB 7.9, November 2016).
2. AP-42 Table 13.2.1-1 recommends 0.0022 lb/VMT for PM10 and 0.00054 lb/VMT for PM2.5. PM2.5 factor is estimated to be 15% of PM10 per CARB's *Miscellanous Process Methodology 7.9 Entrained Road Travel, Paved Road Dust* (November 2016).
3. Consistent with the Project Description, a majority of construction vehicles would access the site from State Route 65 with some use of county roads. Therefore the silt loading factor was weighted assuming 95% travel on SR-65 considered a major road and 5% travel on county roads considered local rural. For SJVAPCD local rural roads are directed to use a silt loading factor of 1.6 rather than EPA defaults. Source: CARB 7.9, Nov 2016: Table 3
4. CARB 7.9, Nov 2016: Table 8. Tulare county recieves ≥ 0.01 inches of rain 40 days/year
5. AP-42 13.2 eqn 2 (EPA, January 2011)
6. Assumption based on onsite fleet mix of heavy, medium and light duty trucks (https://www.epa.gov/emission-standards-reference-guide/vehicle-weight-classifications-emission-standards-reference-guide) and silt loading for "Local" roadway category (CARB 7.9, Nov 2016: Table 3.

Unpaved roads - Emission Factor Derivation Table

$$E.F._{dust,i} = \left(\frac{k(s/12)^1(S/30)^{0.5}}{(M/0.5)^{0.2}} - C\right)\left(1 - \frac{P}{365}\right)$$

where:
E=particulate emissions factor (lb/VMT)
k = particle size multiplier for particle size range and units of interest
s = surface material silt content (%)
M= surface material mositure content (%)
S = mean vehicle speed (mph)
C = emission factor for 1980s vehicle fleet exhust, brake wear and tire wear
P = # of "wet" days with at least 0.01 inch of precipitation

Parameter	**Unit**	**PM10**	**PM2.5**
Particle size, k[1]	lbs/VMT	1.8	0.18
Silt content, s[2]	%	8.5	8.5
Surface moisture content, M[3]	%	6.515	6.515
Mead vehicle speed, S[4]	mph	40	40
Exhaust emission factor, C[5]	lbs/VMT	0.00047	0.00036
precipitation, P[6]	days	40	40
Uncontrolled Emission factor, E	**lb/VMT**	**0.78**	**0.08**
Control efficiency for watering[7]	%	0.55	0.55
Controlled Emission factor, E	**lb/VMT**	**0.35**	**0.035**
Control efficiency for dust palliative[8]	%	0.84	0.84
Controlled Emission factor, E	**lb/VMT**	**0.13**	**0.01**

Notes:

1. Consistent with Eland EIR assumption obtained for Public Roads from AP-42 Table 13.2.2-2.
2. Silt content was obtained from the most recet AP-42 recommendation (Table 13.2.2-1) for "construction sites". The AP-42 guidance provides a range of 0.56-23 with the average as 8.5%.
3. AP-42 recommends range from 0.03-13 % for public roads (Table 13.2.2-3), therefore average mositure content was applied.
4. Consistent with Eland EIR assumption. Note that AP-42 recommends range from 10-55 mph for public roads (Table 13.2.2-3).
5. AP-42 recommended emission factor for 1980's vehicles fleet exhaust, brake wear and tire wear for unpaved roads (Table 13.2.2.-4.)
6. CARB 7.9, Nov 2016: Table 8. Tulare county recieves ≥ 0.01 inches of rain 40 days/year
7. MRI, April 2001. Particulate Emission Measurements from Controlled Construction Activities, EPA/600/R-01/031.
8. Per CARB certification for Soil Sement®

Rexford Solar Project - 700 MW

On-Site Equipment Combustion Emissions[1]

Phase 1 - Site Prep and Grading	# of Days in Phase :	114														
Equipment	HP Estimate	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO_2e
Crawler Tractor	212	1	5	114	571	29.14	35.26	41.97	267.25	355.43	42,537.76	19.80	18.22	0.35	0.39	19.3
Grader	187	3	8	114	2,742	150.37	181.94	216.53	1,291.94	1,743.57	194,215.38	97.21	89.43	1.59	1.79	88.1
Off-highway Truck	402	5	4	114	2,285	109.54	132.54	157.73	766.45	1,146.28	297,810.06	43.10	39.65	2.43	2.75	135.1
Drum Roller Compactor	134	2	8	114	1,828	36.06	43.63	51.93	547.16	461.60	92,151.58	24.68	22.71	0.75	0.85	41.8
Rubber-tired Loader	203	2	8	114	1,828	62.57	75.71	90.10	733.45	682.21	115,228.54	37.31	34.33	0.94	1.06	52.3
Rough-terrain Forklift	130	3	8	114	2,742	49.00	59.29	70.55	834.90	631.05	141,724.77	33.53	30.85	1.16	1.31	64.3
Skid Steer	75	3	8	114	2,742	23.03	27.87	33.16	514.05	369.40	82,882.15	14.83	13.64	0.68	0.77	37.6
					AVG EXHAUST EMISSIONS PER DAY	**4.02**	**4.87**	**5.79**	**43.38**	**47.18**	**8,460.70**	**2.37**	**2.18**	**0.07**	**0.08**	**3.84**
					TOTAL	**459.70**	**556.24**	**661.97**	**4,955.20**	**5,389.54**	**966,550.23**	**270.46**	**248.82**	**7.89**	**8.92**	**438.42**

Phase 2 - Tracker Foundations	# of Days in Phase :	175														
Equipment	HP Estimate	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO_2e
Air Compressor	78	1	8	175	1,400	33.41	39.76	48.11	274.36	230.42	31,131.59	11.51	10.59	0.26	0.40	14.1
Generator Set	84	3	8	175	4,200	59.61	72.12	85.83	724.32	651.91	96,727.78	33.21	30.56	0.79	0.89	43.9
Off-highway Truck	402	5	4	175	3,500	167.80	203.03	241.63	1,174.10	1,755.94	456,204.13	66.03	60.74	3.72	4.21	206.9
Other Construction Equipment	172	1	2	175	350	13.37	16.18	19.25	155.61	168.54	25,664.98	8.83	8.12	0.21	0.24	11.6
Rough-terrain Forklift	100	5	8	175	7,000	125.09	151.36	180.13	2,131.59	1,611.13	361,838.16	85.60	78.76	2.95	3.34	164.1
Rubber-tired Loader	203	1	8	175	1,400	47.92	57.99	69.01	561.77	522.53	88,257.15	28.58	26.29	0.72	0.81	40.0
Vibratory Post Driver	158	7	8	175	9,800	374.33	452.94	539.04	4,357.07	4,719.16	718,619.52	247.23	227.46	5.87	6.63	326.0
Skid Steer	75	7	8	175	9,800	82.32	99.60	118.53	1,837.39	1,320.36	296,249.50	52.99	48.75	2.42	2.74	134.4
					AVG EXHAUST EMISSIONS PER DAY	**5.16**	**6.25**	**7.44**	**64.09**	**62.74**	**11,855.39**	**3.05**	**2.81**	**0.10**	**0.11**	**5.38**
					TOTAL	**903.84**	**1,092.99**	**1,301.53**	**11,216.20**	**10,979.99**	**2,074,692.81**	**533.99**	**491.27**	**16.94**	**19.27**	**941.06**

Phase 3 - Underground Cabling	# of Days in Phase :	175														
Equipment	HP Estimate	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO_2e
Excavator	212	3	8	175	4,200	93.06	112.61	134.01	1,596.59	1,056.55	272,744.04	51.44	47.32	2.23	2.52	123.7
Trencher (big)	300	1	8	175	1,400	93.87	113.58	135.17	556.50	1,370.17	187,098.51	54.49	50.13	1.53	1.73	84.9
Off-highway Truck	402	5	4	175	3,500	167.80	203.03	241.63	1,174.10	1,755.94	456,204.13	66.03	60.74	3.72	4.21	206.9
Drum Roller Compactor	134	2	8	175	2,800	55.24	66.84	79.55	838.17	707.11	141,163.57	37.81	34.78	1.15	1.30	64.0
Rubber-tired Loader	203	1	8	175	1,400	47.92	57.99	69.01	561.77	522.53	88,257.15	28.58	26.29	0.72	0.81	40.0
Skid Steer	75	3	8	175	4,200	35.28	42.69	50.80	787.45	565.87	126,964.07	22.71	20.89	1.04	1.17	57.6
					AVG EXHAUST EMISSIONS PER DAY	**2.82**	**3.41**	**4.06**	**31.51**	**34.16**	**7,271.04**	**1.49**	**1.37**	**0.06**	**0.07**	**3.30**
					TOTAL	**493.17**	**596.73**	**710.16**	**5,514.59**	**5,978.17**	**1,272,431.47**	**261.05**	**240.16**	**10.39**	**11.75**	**577.17**

Phase 4 -Mechanical Installatior	# of Days in Phase :	204														
Equipment	HP Estimate	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO_2e
Air Compressor	78	15	8	204	24,528	585.31	696.57	842.85	4,806.70	4,037.01	545,425.52	201.71	185.57	4.60	7.05	247.4
Generator Set	84	8	8	204	13,082	185.65	224.64	267.34	2,256.01	2,030.49	301,274.78	103.45	95.17	2.46	2.78	136.7
Off-highway Truck	402	6	4	204	4,906	235.18	284.57	338.66	1,645.61	2,461.13	639,415.71	92.54	85.14	5.22	5.90	290.0
Other Construction Equipment	172	1	2	204	409	15.61	18.89	22.49	181.75	196.86	29,976.70	10.31	9.49	0.24	0.28	13.6
Rough-terrain Forklift	100	7	8	204	11,446	204.55	247.51	294.55	3,485.57	2,634.52	591,677.75	139.98	128.78	4.83	5.46	268.4
Rubber-tired Loader	203	3	8	204	4,906	167.93	203.19	241.82	1,968.45	1,830.94	309,253.05	100.14	92.13	2.52	2.85	140.3
Skid Steer	75	1	8	204	1,635	13.73	16.62	19.78	306.58	220.31	49,431.35	8.84	8.14	0.40	0.46	22.4
					AVG EXHAUST EMISSIONS PER DAY	**6.89**	**8.28**	**9.92**	**71.68**	**65.61**	**12,066.80**	**3.21**	**2.96**	**0.10**	**0.12**	**5.47**
					TOTAL	**1,407.98**	**1,692.00**	**2,027.49**	**14,650.68**	**13,411.25**	**2,466,454.87**	**656.97**	**604.41**	**20.28**	**24.79**	**1,118.77**

Phase 5- Electrical Installation		# of Days in Phase :	234													
Equipment	HP Estimate	Number of Units	Daily Hours	Days in Use	Total Hourly Usage (units*hours per day*days)	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO_2e
Air Compressors	78	2	8	234	3,741	89.27	106.24	128.54	733.08	615.69	83,183.62	30.76	28.30	0.70	1.08	37.7
Off-highway Truck	402	7	4	234	6,546	313.84	379.75	451.94	2,196.03	3,284.31	853,284.21	123.49	113.61	6.96	7.88	387.0
Rubber-tired Loader	203	3	8	234	5,611	192.08	232.42	276.60	2,251.58	2,094.29	353,734.66	114.54	105.38	2.89	3.26	160.5
Rough-terrain Forklift	100	4	8	234	7,482	133.70	161.78	192.53	2,278.24	1,721.97	386,732.62	91.49	84.17	3.16	3.57	175.4
Trencher (small)	78	2	8	234	3,741	205.37	248.50	295.73	1,279.77	2,088.76	155,070.02	140.86	129.60	1.27	1.43	70.3
Crane	231	1	2	234	468	18.59	22.49	26.76	134.40	248.86	28,793.49	11.53	10.60	0.24	0.27	13.1
Excavator	212	2	8	234	3,741	82.89	100.29	119.36	1,422.03	941.04	242,924.02	45.81	42.15	1.98	2.24	110.2
					AVG EXHAUST EMISSIONS PER DAY	**4.43**	**5.35**	**6.38**	**44.03**	**47.03**	**8,997.96**	**2.39**	**2.20**	**0.07**	**0.08**	**4.08**
					TOTAL	**1,035.74**	**1,251.46**	**1,491.46**	**10,295.12**	**10,994.93**	**2,103,722.64**	**558.50**	**513.82**	**17.19**	**19.73**	**954.23**

Annual

Year	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO2e
2021	370.59	448.34	533.65	4,175.70	4,391.91	800,605.90	218.30	200.84	6.54	7.41	363.15
2022	2,078.52	2,509.52	2,993.07	23,674.47	23,598.48	4,550,813.81	1,123.61	1,033.72	37.21	42.97	2,064.21
2023	1,851.32	2,231.57	2,665.90	18,781.62	18,763.48	3,532,432.31	939.05	863.93	28.94	34.09	1,602.28
Total	4,300.44	5,189.43	6,192.63	46,631.79	46,753.87	8,883,852.02	2,280.97	2,098.49	72.69	84.46	4,029.65

Max Daily

Year	HC lbs	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	NH_3 lbs	SO_X lbs	MT of CO2e
2021	9.19	11.11	13.23	107.47	109.92	20,316.09	5.42	4.99	0.17	0.19	9.22
2022	9.71	11.69	13.98	107.47	109.92	20,316.09	5.42	4.99	0.17	0.19	9.22
2023	11.32	13.63	16.30	115.71	112.64	21,064.76	5.60	5.15	0.17	0.21	9.55
Total Max Daily	11.32	13.63	16.30	115.71	112.64	21,064.76	5.60	5.15	0.17	0.21	9.55

Notes: MT = Metric Tons

1. Equipment list assumptions were prepared using Eland 1 Solar EIR as recommended by the Applicant
2. Off-high Truck additional emissions during transit operations calculated with onsite mobile emissions
3. Emissions for 2021 calculated using following asssumptions related to construction days/schedule: 65 days of phase1, and 22 days of phase 2
4. Emissions for 2022 calculated using following asssumptions related to construction days/schedule: 50 days of phase 1, 154 days of phase 2, 175 days of phase 3, and 86 days of phase 4
5. Emissions for 2023 calculated using following asssumptions related to construction days/schedule: 118 days of phase 4, and 234 days of phase 5

Rexford Solar Project - 700 MW

On-site Mobile Emissions (max 10 mph)

Activity 1 - Site Preparation				No. Days in Phase:	88											Un-mitigated		Mitigated-Watering		Mitigated-Palliatives	
Vehicle Type	No. Units/Workers	Days Operating	Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs
Vendors (Trucks)	25																				
T6 (MHDT)	8	88	0.25	184	0.01	0.01	0.01	4.49	11.74	0.06	0.02	0.00	0.00	0.00	0.006	72.65	7.31	32.94	3.35	12.00	1.26
T7 (HHDT)	17	88	0.25	368	0.01	0.01	0.04	0.20	49.97	0.08	0.03	0.01	0.00	0.01	0.024	145.30	14.61	65.88	6.70	24.01	2.52
			AVG EMISSIONS PER DAY		**0.00**	**0.00**	**0.00**	**0.05**	**0.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.47**	**0.25**	**1.12**	**0.11**	**0.41**	**0.04**
			TOTAL	**553**	**0.02**	**0.02**	**0.05**	**4.69**	**61.71**	**0.14**	**0.05**	**0.02**	**0.00**	**0.01**	**0.03**	**217.95**	**21.92**	**98.83**	**10.05**	**36.01**	**3.79**

Activity 2 - Grading and Earthwork				No. Days in Phase:	122											Un-mitigated		Mitigated-Watering		Mitigated-Palliatives	
Vehicle Type	No. Units/Workers	Days Operating	Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs
Vendors (Trucks)	25																				
T6 (MHDT)	8	122	0.25	245	0.01	0.01	0.02	5.97	15.61	0.08	0.03	0.01	0.00	0.00	0.007	96.57	9.71	43.79	4.45	15.96	1.68
T7 (HHDT)	17	122	0.25	520	0.02	0.02	0.05	0.28	70.57	0.11	0.04	0.02	0.00	0.01	0.033	205.21	20.63	93.05	9.46	33.91	3.57
			AVG EMISSIONS PER DAY		**0.00**	**0.00**	**0.00**	**0.05**	**0.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.47**	**0.25**	**1.12**	**0.11**	**0.41**	**0.04**
			TOTAL	**765**	**0.02**	**0.03**	**0.07**	**6.25**	**86.18**	**0.19**	**0.08**	**0.02**	**0.00**	**0.01**	**0.04**	**301.78**	**30.35**	**136.84**	**13.91**	**49.86**	**5.24**

Activity 3, 4, 5 - Concrete Foundations, Structural Steel Work and Electrical/Instrumentation Work				No. Days in Phase:	519											Un-mitigated		Mitigated-Watering		Mitigated-Palliatives	
Vehicle Type	No. Units/Workers	Days Operating	Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs
Vendors (Trucks)	55																				
T6 (MHDT)	18	519	0.25	2,376	0.08	0.09	0.15	57.99	151.51	0.76	0.32	0.06	0.00	0.02	0.072	937.48	94.27	425.08	43.21	154.90	16.29
T7 (HHDT)	37	519	0.25	4,753	0.14	0.16	0.47	2.52	644.77	1.03	0.38	0.14	0.01	0.10	0.305	1,874.97	188.53	850.16	86.42	309.81	32.57
			AVG EMISSIONS PER DAY		**0.00**	**0.00**	**0.00**	**0.12**	**1.54**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.42**	**0.55**	**2.46**	**0.25**	**0.90**	**0.09**
			TOTAL	**7,129**	**0.22**	**0.25**	**0.61**	**60.51**	**796.28**	**1.79**	**0.71**	**0.20**	**0.01**	**0.13**	**0.38**	**2,812.45**	**282.80**	**1,275.24**	**129.63**	**464.71**	**48.86**

Activity 6 - Collector Line Installation				No. Days in Phase:	56											Un-mitigated		Mitigated-Watering		Mitigated-Palliatives	
Vehicle Type	No. Units/Workers	Days Operating	Miles Traveled per Unit per Day [1]	Total Onsite Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs
Vendors (Trucks)	15																				
T6 (MHDT)	5	56	0.25	70	0.00	0.00	0.00	1.71	4.46	0.02	0.01	0.00	0.00	0.00	0.002	27.61	2.78	12.52	1.27	4.56	0.48
T7 (HHDT)	10	56	0.25	140	0.00	0.00	0.01	0.07	18.99	0.03	0.01	0.00	0.00	0.00	0.009	55.23	5.55	25.04	2.55	9.13	0.96
			AVG EMISSIONS PER DAY		**0.00**	**0.00**	**0.00**	**0.03**	**0.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.48**	**0.15**	**0.67**	**0.07**	**0.24**	**0.03**
			TOTAL	**210**	**0.01**	**0.01**	**0.02**	**1.78**	**23.45**	**0.05**	**0.02**	**0.01**	**0.00**	**0.00**	**0.01**	**82.84**	**8.33**	**37.56**	**3.82**	**13.69**	**1.44**

Annual

Year	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Un-mitigated Fugitive Dust (PM_{10}) lbs	Un-mitigated Fugitive Dust ($PM_{2.5}$) lbs	Mitigated-Watering Fugitive Dust (PM_{10}) lbs	Mitigated-Watering Fugitive Dust ($PM_{2.5}$) lbs	Mitigated-Palliatives Fugitive Dust (PM_{10}) lbs	Mitigated-Palliatives Fugitive Dust ($PM_{2.5}$) lbs
2021	0.02	0.03	0.06	5.87	78.60	0.18	0.07	0.02	0.00	0.01	0.04	276.71	27.82	125.47	12.75	45.72	4.81
2022	0.13	0.15	0.36	35.43	468.80	1.05	0.41	0.12	0.01	0.07	0.22	1,654.14	166.33	750.03	76.24	273.32	28.74
2023	0.12	0.13	0.32	31.93	420.21	0.95	0.37	0.10	0.01	0.07	0.20	1,484.19	149.24	672.97	68.41	245.24	25.78
Total	**0.27**	**0.31**	**0.75**	**73.23**	**967.61**	**2.18**	**0.86**	**0.24**	**0.01**	**0.15**	**0.46**	**3,415.03**	**343.39**	**1,548.46**	**157.40**	**564.28**	**59.33**

Max daily

Year	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Un-mitigated Fugitive Dust (PM_{10}) lbs	Un-mitigated Fugitive Dust ($PM_{2.5}$) lbs	Mitigated-Watering Fugitive Dust (PM_{10}) lbs	Mitigated-Watering Fugitive Dust ($PM_{2.5}$) lbs	Mitigated-Palliatives Fugitive Dust (PM_{10}) lbs	Mitigated-Palliatives Fugitive Dust ($PM_{2.5}$) lbs
2021	0.00	0.00	0.00	0.22	2.94	0.01	0.00	0.00	0.00	0.00	0.00	10.36	1.04	4.70	0.48	1.71	0.18
2022	0.00	0.00	0.00	0.22	2.94	0.01	0.00	0.00	0.00	0.00	0.00	10.36	1.04	4.70	0.48	1.71	0.18
2023	0.00	0.00	0.00	0.15	1.95	0.00	0.00	0.00	0.00	0.00	0.00	6.90	0.69	3.13	0.32	1.14	0.12
Total Max Daily	**0.00**	**0.00**	**0.00**	**0.22**	**2.94**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.36**	**1.04**	**4.70**	**0.48**	**1.71**	**0.18**

Operational				No. Work days in Year:	244											Un-mitigated		Mitigated-Watering		Mitigated-Palliatives	
Vehicle Type	Trips per Day	Round Trip (miles)	Daily VMT	Annual VMT	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs	Fugitive Dust (PM_{10}) lbs	Fugitive Dust ($PM_{2.5}$) lbs
Pickup Trucks (LDT2)	6	5	28	6,783	0.02	0.01	0.06	0.01	6.40	0.67	0.27	0.05	0.00	0.00	0.003	2,675.89	269.07	1,213.32	123.33	442.14	46.49
Utility/Service Vehicle (T6)	1	5	4	854	0.03	0.03	0.05	0.22	54.45	0.27	0.12	0.02	0.00	0.01	0.026	336.89	33.88	152.76	15.53	55.67	5.85
Water Truck(T7)	1	5	5	1,110	0.03	0.04	0.11	0.59	150.61	0.24	0.09	0.03	0.00	0.02	0.071	437.96	44.04	198.58	20.19	72.37	7.61
				Avg Daily Emissions	**0.00**	**0.00**	**0.00**	**0.00**	**0.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**14.14**	**1.42**	**6.41**	**0.65**	**2.34**	**0.25**
				Annual Total Emissions	**0.09**	**0.08**	**0.22**	**0.82**	**211.45**	**1.18**	**0.47**	**0.11**	**0.00**	**0.03**	**0.10**	**3,450.74**	**346.98**	**1,564.66**	**159.04**	**570.18**	**59.95**

Note: 1 lb = 453.59 grams; MT = metric tons

1. Distance traveled on-site is based on the assumption that vendors vehicles will deliver equipment and materials to staging areas near the access roads and therefore minimal on-site driving would occur.
2. Wokers passenger vehicles are assumed to not be driven on the project site accept for accessing the on-site parking lots will be at or near the main access site for the project.
3. Emissions for 2021 calculated using following assumptions related to construction days/schedule: 65 days from Activity 1, 43 days from Activity 2, and 2 days from Activity 3,4,5
4. Emissions for 2022 calculated using following assumptions related to construction days/schedule: 24 days from Activity 1, 79 days from Activity 2, and 258 days from Activity 3,4,5
5. Emissions for 2023 calculated using following assumptions related to construction days/schedule: 258 days from Activity 3,4,5 and 56 days from Activity 6
6. Operational trip information was not available therefore assumptions were made assuming that daily operations would be similar to the Eland Solar project and that there would be 20 full-time employees.

Rexford Solar Project - 700 MW

On-Road Mobile Emissions (55 mph) [1]

Activity 1 - Site Preparation

Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	No. of Trips (one-way)	Average Miles per Trip (one-way)[5,6]	Daily Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
Within EKAPCD																
Vendors (Trucks)	25															
T6 (MHDT)	8	8	17	15	250	0.00	0.00	0.01	0.07	22.81	0.08	0.03	0.01	0.00	0.00	0
T7 (HHDT)	17	17	33	15	500	0.01	0.01	0.02	0.23	106.00	0.11	0.04	0.02	0.00	0.02	0
Employee Commute	100															
Passenger Vehicle (LDA)	73	73	146	10	1,460	0.17	0.06	0.85	0.07	213.54	0.15	0.06	0.01	0.01	0.01	0
Light-duty Truck (LDT2)	27	27	54	10	540	0.11	0.03	0.28	0.04	35.36	0.05	0.02	0.00	0.01	0.00	0
					Daily Emissions[7]	**0.29**	**0.10**	**1.17**	**0.40**	**377.71**	**0.39**	**0.16**	**0.03**	**0.02**	**0.03**	**0.18**
	No. of Days:	88			*Total Activity 1 Emissions:*	*25.91*	*8.64*	*103.29*	*35.06*	*33,389.60*	*34.63*	*13.97*	*3.00*	*1.53*	*2.78*	*15.50*
		2210														

Activity 2 - Grading and Earthwork

Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	No. of Trips (one-way)	Average Miles per Trip (one-way)[5,6]	Daily Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
Within EKAPCD																
Vendors (Trucks)	25															
T6 (MHDT)	8	8	16	15	240	0.00	0.00	0.01	0.06	21.90	0.08	0.03	0.01	0.00	0.00	0
T7 (HHDT)	17	17	34	15	510	0.01	0.01	0.02	0.23	108.12	0.11	0.04	0.02	0.00	0.02	0
Employee Commute	400															
Passenger Vehicle (LDA)	292	292	584	10	5,840	0.69	0.23	3.40	0.27	854.15	0.58	0.23	0.04	0.04	0.03	0
Light-duty Truck (LDT2)	108	108	216	10	2,160	0.45	0.13	1.13	0.14	141.44	0.21	0.08	0.02	0.02	0.01	0
					Daily Emissions[7]	**1.15**	**0.36**	**4.57**	**0.70**	**1,125.61**	**0.99**	**0.40**	**0.07**	**0.07**	**0.07**	**0.52**
	No. of Days:	122			*Total Activity 2 Emissions:*	*140.53*	*44.44*	*559.24*	*86.06*	*137,774.49*	*120.82*	*48.44*	*8.94*	*8.36*	*7.97*	*63.56*
		3060														

Activity 3, 4, 5 - Concrete Foundations, Structural Steel Work and Electrical/Instrumentation Work

Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	No. of Trips (one-way)	Average Miles per Trip (one-way)[5,6]	Daily Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
Within EKAPCD																
Vendors (Trucks)	55															
T6 (MHDT)	18	18	37	15	550	0.01	0.01	0.02	0.14	50.18	0.18	0.08	0.01	0.00	0.01	0
T7 (HHDT)	37	37	73	15	1,100	0.01	0.01	0.05	0.51	233.21	0.25	0.10	0.03	0.00	0.04	0
Employee Commute	1,000															
Passenger Vehicle (LDA)	730	730	1,460	10	14,600	1.73	0.57	8.50	0.66	2,135.37	1.45	0.58	0.09	0.11	0.08	1
Light-duty Truck (LDT2)	270	270	540	10	5,400	1.12	0.32	2.83	0.35	353.60	0.54	0.21	0.04	0.06	0.03	0
					Daily Emissions[7]	**2.87**	**0.90**	**11.41**	**1.66**	**2,772.36**	**2.41**	**0.97**	**0.18**	**0.17**	**0.16**	**1.28**
	No. of Days:	519			*Total Activity 3, 4, 5 Emissions:*	*1,487.00*	*469.23*	*5,916.95*	*862.92*	*1,437,467.66*	*1,250.82*	*501.46*	*91.37*	*88.48*	*81.02*	*662.89*
		28518														

Activity 6 - Collector Line Installation

Vehicle Type[2,3]	Daily Trips To Site[4]	Daily Trips from Site	No. of Trips (one-way)	Average Miles per Trip (one-way)[5,6]	Daily Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
Within EKAPCD																
Vendors (Trucks)	15															
T6 (MHDT)	5	5	10	15	150	0.00	0.00	0.01	0.04	13.69	0.05	0.02	0.00	0.00	0.00	0
T7 (HHDT)	10	10	20	15	300	0.00	0.00	0.01	0.14	63.60	0.07	0.03	0.01	0.00	0.01	0
Employee Commute	75															
Passenger Vehicle (LDA)	55	55	110	10	1,095	0.13	0.04	0.64	0.05	160.15	0.11	0.04	0.01	0.01	0.01	0
Light-duty Truck (LDT2)	20	20	41	10	405	0.08	0.02	0.21	0.03	26.52	0.04	0.02	0.00	0.00	0.00	0
					Daily Emissions[7]	**0.22**	**0.07**	**0.87**	**0.25**	**263.96**	**0.26**	**0.11**	**0.02**	**0.01**	**0.02**	**0.12**
	No. of Days:	56			*Total Activity 6 Emissions:*	*12.24*	*4.03*	*48.78*	*14.18*	*14,781.80*	*14.83*	*5.97*	*1.25*	*0.73*	*1.15*	*6.85*

Annual

Year	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
2021	74.44	23.86	296.36	59.39	78,724.06	72.90	29.29	5.71	4.42	5.16	36.39
2022	838.08	264.65	3,334.91	494.69	813,668.98	710.13	284.72	52.08	49.86	46.23	375.26
2023	753.16	237.82	2,996.98	444.14	731,020.51	638.07	255.83	46.78	44.81	41.52	337.14
Total	**1,665.68**	**526.33**	**6,628.25**	**998.22**	**1,623,413.54**	**1,421.11**	**569.84**	**104.56**	**99.10**	**92.91**	**748.80**

Daily

Year	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
2021	4.31	1.37	17.15	2.76	4,275.68	3.79	1.52	0.28	0.26	0.25	1.97
2022	4.31	1.37	17.15	2.76	4,275.68	3.79	1.52	0.28	0.26	0.25	1.97
2023	3.09	0.98	12.28	1.92	3,036.32	2.68	1.07	0.20	0.18	0.18	1.40
Total Max Daily	**4.31**	**1.37**	**17.15**	**2.76**	**4,275.68**	**3.79**	**1.52**	**0.28**	**0.26**	**0.25**	**1.97**

Operation[8] **No. Work days in Year: 244**

Vehicle Type	Trips to Site (Daily)	Trips from Site (Daily)	No. of Daily Trips (one-way)	Average Miles per Trip (one-way)[3,4,5]	Daily Vehicle Miles Traveled	ROG lbs	TOG lbs	CO lbs	NO_X lbs	CO_2 lbs	PM_{10} lbs	$PM_{2.5}$ lbs	SO_X lbs	CH_4 lbs	N_2O lbs	MT of CO_2e
Employee Commute	20	25														
Passenger Vehicle (LDA)	15	18	33	10	326	0.03	0.01	0.18	0.01	47.47	0.03	0.01	0.00	0.00	0.00	0
Light-duty Truck (LDT2)	5	7	12	10	124	0.02	0.01	0.06	0.01	7.99	0.01	0.00	0.00	0.00	0.00	0
Service Vehicles (LHDT2)	3	3	6	10	60	0.00	0.01	0.00	0.30	0.00	0.01	0.01	0.00	0.00	0.00	0
Equipment/Material Delivery (T6)	0.3	0.3	0.6	10	6	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0
					Daily Operational On-road Emissions	**0.06**	**0.03**	**0.24**	**0.32**	**55.96**	**0.06**	**0.03**	**0.00**	**0.00**	**0.00**	**0.03**
					Annual Operational On-road Emissions	**14.53**	**7.40**	**59.77**	**78.82**	**13,653.82**	**14.49**	**6.23**	**1.12**	**0.89**	**0.66**	**6.28**

Note: 1 lb = 453.59 grams; MT = metric tons

1. On-road emissions use mileage to determine running emissions from associated with vendor vehicles coming to the site. Starting and resting emissions for vendor vehicles are not included here, and are included with on-site emissions. Employee commute vehicles inlcude starting and resting emissions here assuming that only one trip is made per day per employee commute vehicle.
2. It is assumed that 1/3 of the vendor trips are done by T6 trucks (MHDT) and 2/3 by T7 trucks (HHDT); assumption is the same as used in Eland 1 Solar Project
3. To more accurately represent the type of vehicles used by employees for commuting it is assumed that 73% of the vehicles are light-duty automobiles (LDA) and 27% is light-duty trucks (LDT2). Percentages were derived from the distribution of gasoline powered LDA and LDT2 VMT from EMFAC2017.
4. Trip data is based on Aratina traffic values and have been vetted by the applicant.
5. Assumed that vendors are coming from either Porterville, approximately 15 miles from the project site.
6. Assumed that employees are coming from within a 10 mile radius of the project site and that each employee drives themselves (i.e. no carpooling)
7. On-road emissions are based on all vendor trucks being diesel powered and all employee commute vehicles are gasoline powered.
8. Operational trip information was not available therefore assumptions were made assuming that daily operations would be similar to the Eland Solar project and that there would be 20 full-time employees and have the same operational emissions.

Rexford Solar Project - 700 MW

Fugitive Dust Emissions During Construction On-site (excludes vehicular traffic from vendor vehicles)

				Natural Soil					
Phase 1 - Site Prep and Grading		**Number of Days**	**114**	**No Additional Control[4]**		**With Water Control [5]**		**With Palliative Control[6]**	
Vehicle Type	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor [4]**	**$PM_{2.5}$ lbs/mile factor [4]**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Mobile Construction Equipment (0.5 mph) [1]	0.97	0.78	0.078	0.76	0.08	0.3	0.0	0.1	0.0
Stationary Construction Equipment (0.25 mpd) [2]	0	0.78	0.078	0.00	0.00	0.0	0.0	0.0	0.0
Off-highway Truck[3]	2,856	0.39	0.039	1,121.28	111.97	505.5	50.6	180.8	18.3
Total Pounds Per day				**9.82**	**0.98**	**4.43**	**0.44**	**1.58**	**0.16**
Total	**2,857**			**1,122.04**	**112.04**	**505.82**	**50.64**	**180.90**	**18.26**

				Natural Soil					
Phase 2 - Tracker Foundations		**Number of Days**	**175**	**No Additional Control[4]**		**With Water Control [5]**		**With Palliative Control[6]**	
Vehicle Type	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor [4]**	**$PM_{2.5}$ lbs/mile factor [4]**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Mobile Construction Equipment (0.5 mph) [1]	1.3	0.78	0.078	1.05	0.10	0.5	0.0	0.2	0.0
Stationary Construction Equipment (0.25 mpd) [2]	0	0.78	0.078	0.00	0.00	0.0	0.0	0.0	0.0
Off-highway Truck[3]	4,375	0.39	0.039	1,717.64	171.52	774.3	77.5	276.9	28.0
Total Pounds Per day				**9.82**	**0.98**	**4.43**	**0.44**	**1.58**	**0.16**
Total	**4,376**			**1,718.68**	**171.62**	**774.79**	**77.57**	**277.10**	**27.98**

				Natural Soil					
Phase 3 - Underground Cabling		**Number of Days**	**175**	**No Additional Control[4]**		**With Water Control [5]**		**With Palliative Control[6]**	
Vehicle Type	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor [4]**	**$PM_{2.5}$ lbs/mile factor [4]**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Mobile Construction Equipment (0.5 mph) [1]	0.9	0.78	0.078	0.71	0.07	0.3	0.0	0.1	0.0
Stationary Construction Equipment (0.25 mpd) [2]	0	0.78	0.078	0.00	0.00	0.0	0.0	0.0	0.0
Off-highway Truck[3]	4,375	0.39	0.039	1,717.64	171.52	774.3	77.5	276.9	28.0
Total Pounds Per day				**9.82**	**0.98**	**4.43**	**0.44**	**1.58**	**0.16**
Total	**4,376**			**1,718.35**	**171.59**	**774.64**	**77.55**	**277.04**	**27.97**

				Natural Soil					
Phase 4 -Mechanical Installation		**Number of Days**	**204.4**	**No Additional Control[4]**		**With Water Control [5]**		**With Palliative Control[6]**	
Vehicle Type	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor [4]**	**$PM_{2.5}$ lbs/mile factor [4]**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Mobile Construction Equipment (0.5 mph) [1]	1.3	0.78	0.078	1.04	0.10	0.5	0.0	0.2	0.0
Stationary Construction Equipment (0.25 mpd) [2]	0	0.78	0.078	0.00	0.00	0.0	0.0	0.0	0.0
Off-highway Truck[3]	6,132	0.39	0.039	2,407.44	240.40	1085.3	108.7	388.1	39.2
Total Pounds Per day				**11.78**	**1.18**	**5.31**	**0.53**	**1.90**	**0.19**
Total	**6,133**			**2,408.48**	**240.50**	**1,085.75**	**108.70**	**388.31**	**39.21**

				Natural Soil					
Phase 5- Electrical Installation		**Number of Days**	**233.8**	**No Additional Control[4]**		**With Water Control [5]**		**With Palliative Control[6]**	
Vehicle Type	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor [4]**	**$PM_{2.5}$ lbs/mile factor [4]**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Mobile Construction Equipment (0.5 mph) [1]	1.13	0.78	0.078	0.89	0.09	0.4	0.0	0.1	0.0
Stationary Construction Equipment (0.25 mpd) [2]	0	0.78	0.078	0.00	0.00	0.0	0.0	0.0	0.0
Off-highway Truck[3]	8,183	0.39	0.039	3,212.67	320.81	1448.3	145.0	518.0	52.3
Total Pounds Per day				**13.74**	**1.37**	**6.20**	**0.62**	**2.22**	**0.22**
Total	**8,184**			**3,213.56**	**320.90**	**1,448.68**	**145.04**	**518.11**	**52.31**

Annual

Year	No Additional Control[4]		With Water Control [5]		With Palliative Control[6]	
	PM_{10} lbs	$PM_{2.5}$ lbs	PM_{10} lbs	$PM_{2.5}$ lbs	PM_{10} lbs	$PM_{2.5}$ lbs
2021	844.66	84.35	380.77	38.12	136.18	13.75
2022	4,727.77	472.10	2,131.29	213.38	762.24	76.96
2023	4,608.69	460.21	2,077.61	208.00	743.04	75.02
Total	**10,181.12**	**1,016.66**	**4,589.67**	**459.50**	**1,641.46**	**165.73**

Max Daily

Year	No Additional Control[4]		With Water Control [5]		With Palliative Control[6]	
	PM_{10} lbs	$PM_{2.5}$ lbs	PM_{10} lbs	$PM_{2.5}$ lbs	PM_{10} lbs	$PM_{2.5}$ lbs
2021	19.64	1.96	8.86	0.89	3.17	0.32
2022	21.60	2.16	9.74	0.97	3.48	0.35
2023	25.53	2.55	11.51	1.15	4.12	0.42
Total Max Daily	**25.53**	**2.55**	**11.51**	**1.15**	**4.12**	**0.42**

Notes:

1. Crawler tractor, loader, skid-steer, drum roller compactor, and forklifts assumed to transit an average of 0.5 acres/8hr day. VMT is estimated based on the hours of operation and conversion of acreage to square miles to miles. Mobile equipment that is considered earth moving (i.e. grader) are accounted for seperately due to a specific operations.
2. Trencher, pile driver, excavator, and crane work primarily in place and are not considered mobile in this analysis.
3. Off-highway trucks are assumed to travel 5 miles per day on site.
4. Uncontrolled emission factors based on silt content of local soil, onsite fleet mix, and and typical construction activites frpm AP-42, Table 13.2.2-2
5. Emission factors are reduced via water control by 55% efficiency per MRI, April 2001. Particulate Emission Measurements from Controlled Construction Activities, EPA/600/R-01/031.
6. Emission factors are reduced via palliative control by 84% efficiency per CARB certification for Soil Sement®
7. Emissions based on assumption of % of activity occuring on compacted/scraper road where base uncontrolled emission factors are 2.27 and 0.227 for PM_{10} and $PM_{2.5}$, respectively.
8. Emissions based on assumption of % of activity occuring on gravel road where base uncontrolled emission factors are 1.76 and 0.176 for PM_{10} and $PM_{2.5}$, respectively.
9. Emissions for 2021 calculated using following asssumptions related to construction days/schedule: 65 days of phase1, and 22 days of phase 2
10. Emissions for 2022 calculated using following asssumptions related to construction days/schedule: 50 days of phase 1, 154 days of phase 2, 175 days of phase 3, and 86 days of phase 4
11. Emissions for 2023 calculated using following asssumptions related to construction days/schedule: 118 days of phase 4, and 234 days of phase 5

Particulates from Grading [1]

		Grader Parameters	
Travel Speed (S):		7.1	mph
Hours Operating:		8	
Acres/ 8hr-day:		0.5	
Width of Grading Blade (ft)[2]:		12	**Water Controlled[3]**
PM-10 Emissions Factor (lbs/ VMT)	E = 0.6 * 0.051 * (S)^(2.0)	*1.54255*	*0.6*
PM-2.5 Emissions Factor (lbs/VMT)	E = 0.031*0.04*(S)^(2.5)	*0.2*	*0.1*

Location	Acreage	VMT[4]	Fugitive Dust From Grading		Mitigated Fugitive Dust From Grading[3]	
			PM 10 (lbs)	PM2.5 (lbs)	PM 10 (lbs)	PM2.5 (lbs)
Site	3620	2488.75	3839.011358	414.5231884	1497.214429	161.6640435
TOTAL	3620	2488.75	3839.011358	414.5231884	1497.214429	161.6640435

Annual

Year	Fugitive Dust From Grading		Mitigated Fugitive Dust From Grading[3]	
	PM_{10} lbs	$PM_{2.5}$ lbs	PM_{10} lbs	$PM_{2.5}$ lbs
2021	2,167.51	234.04	845.33	91.28
2022	1,671.50	180.48	651.89	70.39
2023	0.00	0.00	0.00	0.00
Total	**3,839.01**	**414.52**	**1,497.21**	**161.66**

Max Daily

Year	Fugitive Dust From Grading		Mitigated Fugitive Dust From Grading[3]	
	PM_{10} lbs	$PM_{2.5}$ lbs	PM_{10} lbs	$PM_{2.5}$ lbs
2021	33.60	3.63	13.11	1.42
2022	33.60	3.63	13.11	1.42
2023	0.00	0.00	0.00	0.00
Total Max Daily	**33.60**	**3.63**	**13.11**	**1.42**

Notes:

1. Fugitive dust emissions from grading the project site were estimated using the methodology described in Section 11., Western Surface Coal Mining of the USEPA AP-42 and used in CalEEMod2016.3.2 (CAPCOA 2017).
2. Blade width of grading equipment is default width of 12 feet based on Caterpillar's 140 Motor Grader. (CalEEMod Appendix A, 2017)
3. Assumes use of water to control dust reduces dust by 61% based on per 3.2 hour watering interval of general construction; test series 701 reproted in WRAP Fugitive Dust Handbook, September 2006
4. VMT is estimated based on grading area and blade width where VMT = Acres graded/Blade Width * (43560 sqft/acre)/(5280 ft/mile)

Rexford Solar Project - 700 MW

Fugitive Dust Emissions on Paved Roads in Tulare County [1]

Activity 1 - Site Preparation					Number of Days	88
Vehicle Type	**DailyVehicle Miles Traveled**	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor**	**$PM_{2.5}$ lbs/mile factor**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Vendors (Trucks)						
T6 (MHDT)	250	22,100	0.001	0.0003	25.34	6.22
T7 (HHDT)	500	44,200	0.001	0.0003	50.67	12.44
Employee Commute						
Passenger Vehicle (LDA)	1,460	129,064	0.001	0.0003	147.96	36.32
Light-duty Truck (LDT2)	540	47,736	0.001	0.0003	54.72	13.43
Total Pounds Per Day					**3.15**	**0.77**
Total	**2,750**				**278.69**	**68.41**

Activity 2 - Grading and Earthwork					Number of Days	122
Vehicle Type	**DailyVehicle Miles Traveled**	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor**	**$PM_{2.5}$ lbs/mile factor**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Vendors (Trucks)						
T6 (MHDT)	240	29,376	0.001	0.0003	33.68	8.27
T7 (HHDT)	510	62,424	0.001	0.0003	71.56	17.57
Employee Commute						
Passenger Vehicle (LDA)	5,840	714,816	0.001	0.0003	819.46	201.14
Light-duty Truck (LDT2)	2,160	264,384	0.001	0.0003	303.09	74.39
Total Pounds Per Day					**10.03**	**2.46**
Total	**8,000**				**1,227.79**	**301.37**

Activity 3, 4, 5 - Concrete Foundations, Structural Steel Work and Electrical/Instrumentation Work					Number of Days	519
Vehicle Type	**DailyVehicle Miles Traveled**	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor**	**$PM_{2.5}$ lbs/mile factor**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Vendors (Trucks)						
T6 (MHDT)	550	285,175	0.001	0.0003	326.92	80.24
T7 (HHDT)	1,100	570,350	0.001	0.0003	653.85	160.49
Employee Commute						
Passenger Vehicle (LDA)	14,600	7,570,100	0.001	0.0003	8,678.35	2,130.14
Light-duty Truck (LDT2)	5,400	2,799,900	0.001	0.0003	3,209.80	787.86
Total Pounds Per Day					**24.82**	**6.09**
Total	**20,000**				**12,868.92**	**3,158.73**

Activity 6 - Collector Line Installation					Number of Days	56
Vehicle Type	**DailyVehicle Miles Traveled**	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor**	**$PM_{2.5}$ lbs/mile factor**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Vendors (Trucks)						
T6 (MHDT)	150	8,400	0.001	0.0003	9.63	2.36
T7 (HHDT)	300	16,800	0.001	0.0003	19.26	4.73
Employee Commute						
Passenger Vehicle (LDA)	1,095	61,320	0.001	0.0003	70.30	17.25
Light-duty Truck (LDT2)	405	22,680	0.001	0.0003	26.00	6.38
Total Pounds Per Day					**2.24**	**0.55**
Total	**1,500**				**125.19**	**30.73**

Annual

Year	PM_{10} lbs	$PM_{2.5}$ lbs
2021	688.04	168.88
2022	7,275.24	1,785.74
2023	6,537.31	1,604.61
Total	**14,500.59**	**3,559.24**

Daily

Year	PM_{10} lbs	$PM_{2.5}$ lbs
2021	38.00	9.33
2022	38.00	9.33
2023	27.05	6.64
Toatal Max Daily	**38.00**	**9.33**

Operational Phase Fugitive Dust Emissions on Paved Roads					**Number of Days:**	**244**
Vehicle Type	**DailyVehicle Miles Traveled**	**Total Vehicle Miles Traveled**	**PM_{10} lbs/mile factor**	**$PM_{2.5}$ lbs/mile factor**	**PM_{10} lbs**	**$PM_{2.5}$ lbs**
Employee Commute						
Passenger Vehicle (LDA)	326	79544	0.001	0.0003	91.19	22.38
Light-duty Truck (LDT2)	124	30256	0.001	0.0003	34.69	8.51
Service Vehicles (LHDT2)	60	14640	0.001	0.0003	16.78	4.12
Equipment/Material Delivery (T6)	6	1356.64	0.001	0.0003	1.56	0.38
				Total Pounds Per Day	**0.59**	**0.15**
				Annual Pounds	**144.21**	**35.40**

Notes:

1. Emission factor calculation presented in "Emission Factors" tab

Rexford Solar Project - 700 MW

Construction Criteria Emissions by Year

Emission Type	Source	Emissions (tons per year)						With Water Control		With Palliative Control	
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	PM_{10} (tons)	$PM_{2.5}$ (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
2021											
Exhaust	Off Road Construction Equipment	0.2	2.2	0.0	2.1	0.1	0.1	0.1	0.1	0.1	0.1
	On-Road Vehicles	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Dust	Off Road Construction Activity	-	-	-	-	1.5	0.2	0.6	0.1	0.5	0.1
	On-Road Vehicles (resuspended)	-	-	-	-	0.5	0.1	0.4	0.1	0.4	0.1
	Subtotal	**0.3**	**2.2**	**0.0**	**2.2**	**2.1**	**0.4**	**1.2**	**0.3**	**1.0**	**0.3**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	No	No	No	No	No	No	No	No	No
2022											
Exhaust	Off Road Construction Equipment	1.3	11.8	0.0	11.8	0.6	0.5	0.6	0.5	0.6	0.5
	On-Road Vehicles	0.4	0.3	0.0	1.7	0.4	0.1	0.4	0.1	0.4	0.1
Fugitive Dust	Off Road Construction Activity	-	-	-	-	3.2	0.3	1.4	0.1	0.7	0.1
	On-Road Vehicles (resuspended)	-	-	-	-	4.5	1.0	4.0	0.9	3.8	0.9
	Subtotal	**1.7**	**12.1**	**0.0**	**13.5**	**8.6**	**2.0**	**6.3**	**1.7**	**5.4**	**1.6**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	Yes	No	No	No	No	No	No	No	No
2023											
Exhaust	Off Road Construction Equipment	1.1	9.4	0.0	9.4	0.5	0.4	0.5	0.4	0.5	0.4
	On-Road Vehicles	0.4	0.2	0.0	1.5	0.3	0.1	0.3	0.1	0.3	0.1
Fugitive Dust	Off Road Construction Activity	-	-	-	-	2.3	0.2	1.0	0.1	0.4	0.0
	On-Road Vehicles (resuspended)	-	-	-	-	4.0	0.9	3.6	0.8	3.4	0.8
	Subtotal	**1.5**	**9.6**	**0.0**	**10.9**	**7.1**	**1.7**	**5.4**	**1.5**	**4.6**	**1.4**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	No	No	No	No	No	No	No	No	No
Total											
Exhaust	Off Road Construction Equipment	2.6	23.4	0.0	23.3	1.1	1.0	1.1	1.0	1.1	1.0
	On-Road Vehicles	0.8	0.5	0.1	3.3	0.7	0.3	0.7	0.3	0.7	0.3
Fugitive Dust	Off Road Construction Activity	-	-	-	-	7.0	0.7	3.0	0.3	1.6	0.2
	On-Road Vehicles (resuspended)	-	-	-	-	9.0	2.0	8.0	1.9	7.5	1.8
	Subtotal	**3.4**	**23.9**	**0.1**	**26.6**	**17.8**	**4.0**	**12.9**	**3.5**	**11.0**	**3.3**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	Yes	No	No	Yes	No	No	No	No	No

1. Operational emissions were estimated assuming that operationas for Rexford would be similar as for Eland Solar Project.
2. Assumes maintenance vehicles are traveling on 50% paved roads and 50% unpaved roads/ untreated soil
3. Annualized at 260 working days per year

Operation Criteria Emissions Annually

Emission Type	Source	Emissions (tons per year)					
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$
Operational							
Exhaust	On Road and On-Site	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive	Maintenance Vehicles	-	-	-	-	1.7	0.2
	Subtotal	**0.0**	**0.0**	**0.0**	**0.0**	**1.7**	**0.2**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**
Exceed Threshold?		No	No	No	No	No	No
Total Operations Annualized		***0.05955315***	***0.32637571***	***0.00504024***	***0.24585781***	***14.2066005***	***1.44950242***

Annualized at 244 working days per year

Construction Criteria Emissions by Year Application of Indirect Source Rule

Emission Type	Source	Emissions (tons per year)						With Water Control		With Palliative Control	
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	PM_{10} (tons)	$PM_{2.5}$ (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)
2021											
Exhaust	Off Road Construction	0.2	1.8	0.0	2.1	0.1	0.1	0.1	0.1	0.1	0.1
	On-Road Vehicles	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Dust	Off Road Construction	-	-	-	-	1.5	0.2	0.6	0.1	0.5	0.1
	On-Road Vehicles	-	-	-	-	0.5	0.1	0.4	0.1	0.4	0.1
Subtotal		**0.3**	**1.8**	**0.0**	**2.2**	**2.1**	**0.4**	**1.1**	**0.3**	**1.0**	**0.3**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	No	No	No	No	No	No	No	No	No
2022											
Exhaust	Off Road Construction	1.3	9.4	0.0	11.8	0.3	0.5	0.3	0.5	0.3	0.5
	On-Road Vehicles	0.4	0.3	0.0	1.7	0.4	0.1	0.4	0.1	0.4	0.1
Fugitive Dust	Off Road Construction	-	-	-	-	3.2	0.3	1.4	0.1	0.7	0.1
	On-Road Vehicles	-	-	-	-	4.5	1.0	4.0	0.9	3.8	0.9
Subtotal		**1.7**	**9.7**	**0.0**	**13.5**	**8.3**	**2.0**	**6.1**	**1.7**	**5.1**	**1.6**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	No	No	No	No	No	No	No	No	No
2023											
Exhaust	Off Road Construction	1.1	7.5	0.0	9.4	0.3	0.4	0.3	0.4	0.3	0.4
	On-Road Vehicles	0.4	0.2	0.0	1.5	0.3	0.1	0.3	0.1	0.3	0.1
Fugitive Dust	Off Road Construction	-	-	-	-	2.3	0.2	1.0	0.1	0.4	0.0
	On-Road Vehicles	-	-	-	-	4.0	0.9	3.6	0.8	3.4	0.8
Subtotal		**1.5**	**7.7**	**0.0**	**10.9**	**6.9**	**1.7**	**5.2**	**1.5**	**4.3**	**1.4**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	No	No	No	No	No	No	No	No	No
Total											
Exhaust	Off Road Construction	2.6	18.7	0.0	23.3	0.6	1.0	0.6	1.0	0.6	1.0
	On-Road Vehicles	0.8	0.5	0.1	3.3	0.7	0.3	0.7	0.3	0.7	0.3
Fugitive Dust	Off Road Construction	-	-	-	-	7.0	0.7	3.0	0.3	1.6	0.2
	On-Road Vehicles	-	-	-	-	9.0	2.0	8.0	1.9	7.5	1.8
Subtotal		**3.4**	**19.2**	**0.1**	**26.6**	**17.3**	**4.0**	**12.4**	**3.5**	**10.4**	**3.3**
SJVAPCD Tons/Year Threshold		**10**	**10**	**27**	**100**	**15**	**15**	**15**	**15**	**15**	**15**
Exceed Threshold?		No	Yes	No	No	Yes	No	No	No	No	No

1. Operational emissions were estimated assuming that operationas for Rexford would be similar as for Eland Solar
2. Assumes maintenance vehicles are traveling on 50% paved roads and 50% unpaved roads/ untreated soil
3. Annualized at 260 working days per year

Max daily Construction Emissions by Year

Emission Type	Source	Emissions (Max Daily lbs)						With Water Control		With Palliative Control	
		ROG	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	PM_{10} (lbs)	$PM_{2.5}$ (lbs)	PM_{10} (lbs)	$PM_{2.5}$ (lbs)
2021											
Exhaust	Off Road Construction	11.1	109.9	0.2	107.5	5.4	5.0	5.4	5.0	5.4	5.0
	On-Road Vehicles	4.3	3.0	0.3	17.2	3.8	1.5	3.8	1.5	3.8	1.5
Fugitive Dust	Off Road Construction	-	-	-	-	53.2	5.6	22.0	2.3	3.2	0.3
	On-Road Vehicles	-	-	-	-	48.4	10.4	42.7	9.8	39.7	9.5
	Subtotal	**15.4**	**112.9**	**0.5**	**124.6**	**110.8**	**22.5**	**73.9**	**18.6**	**52.1**	**16.3**
SJVAPCD Daily Threshold		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Exceed Threshold?		No	Yes	No	Yes	Yes	No	No	No	No	No
2022											
Exhaust	Off Road Construction	11.7	109.9	0.2	107.5	5.4	5.0	5.4	5.0	5.4	5.0
	On-Road Vehicles	4.3	3.0	0.3	17.2	3.8	1.5	3.8	1.5	3.8	1.5
Fugitive Dust	Off Road Construction	-	-	-	-	55.2	5.8	22.8	2.4	3.5	0.4
	On-Road Vehicles	-	-	-	-	48.4	10.4	42.7	9.8	39.7	9.5
	Subtotal	**16.0**	**112.9**	**0.5**	**124.6**	**112.8**	**22.7**	**74.8**	**18.7**	**52.4**	**16.4**
SJVAPCD Daily Threshold		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Exceed Threshold?		No	Yes	No	Yes	Yes	No	No	No	No	No
2023											
Exhaust	Off Road Construction	13.6	112.6	0.2	115.7	5.6	5.2	5.6	5.2	5.6	5.2
	On-Road Vehicles	3.1	2.1	0.2	12.3	2.7	1.1	2.7	1.1	2.7	1.1
Fugitive Dust	Off Road Construction	-	-	-	-	25.5	2.5	11.5	1.2	4.1	0.4
	On-Road Vehicles	-	-	-	-	34.0	7.3	30.2	7.0	28.2	6.8
	Subtotal	**16.7**	**114.7**	**0.4**	**128.0**	**67.8**	**16.1**	**50.0**	**14.3**	**40.6**	**13.4**
SJVAPCD Daily Threshold		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Exceed Threshold?		No	Yes	No	Yes	No	No	No	No	No	No
Max											
Exhaust	Off Road Construction	13.6	112.6	0.2	115.7	5.6	5.2	5.6	5.2	5.6	5.2
	On-Road Vehicles	4.3	3.0	0.3	17.2	3.8	1.5	3.8	1.5	3.8	1.5
Fugitive Dust	Off Road Construction	-	-	-	-	55.2	5.8	22.8	2.4	4.1	0.4
	On-Road Vehicles	-	-	-	-	48.4	10.4	42.7	9.8	39.7	9.5
	Subtotal	**17.9**	**115.6**	**0.5**	**132.9**	**113.0**	**22.8**	**74.9**	**18.9**	**53.2**	**16.6**
SJVAPCD Daily Threshold		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Exceed Threshold?		No	Yes	No	Yes	Yes	No	No	No	No	No

1. Operational emissions were estimated assuming that operationas for Rexford would be similar as for
2. Assumes maintenance vehicles are traveling on 50% paved roads and 50% unpaved roads/ untreated
3. Annualized at 260 working days per year

GHG Emissions from Construction

Year	Emissions Source (MT of CO2e)				Total (MT of CO_2e)
	Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	
2021	363	0.0	36	8	408
2022	2,064	0.2	375	34	2,473
2023	1,602	0.2	337	34	1,973
Total Construction	4,030	0.5	749	**76**	**4,855**
Decommissioning	4,030	0.5	749	76	4,855
Amortized Emissions (30-year life)	*269*	*0*	*50*	*5*	*324*
EKAPCD Threshold					**25,000**
Exceed Threshold?					No

Note: Numbers have been rounded to the nearest metric ton (MT).

1. From the project description prepared by Rexford, approximately 400AF of water would be required over the projects construction period.

2. Construction begins at start of Q4 (October) . Therefore 3 months of construction occur in 2021, 12 months in 2022, and the remaining 12 months in 2023. Water use by year was weighted based on that schedule.

GHG Emissions from Operation

Location	Emissions Source (MT of CO2e)				Total (MT of CO_2e)
	Off-Road	On-site Mobile	Off-site Mobile	Indirect GHG Emissions from Water Use	
Total		0	6	9	16
Amortized Construct	269	0	50	5	324
Total	**269**	**0**	**56**	**15**	**340**
EKAPCD CEQA Threshold					**25,000**
Exceed Threshold?					No

Note: Numbers have been rounded to the nearest metric ton (MT).

1. From the project description prepared for Rexford, approximately 50 AF of water would be required each year during operation.

Construction Ambient Air Quality Assessment Summary

GRP	UTM		Max 1-hr Concentration $\mu g/m^3$	Max 1-hr Concentration ppb	Pollutant	Pollutant Id (AERMOD)	Background Concentration (ppb)	Background + Max Modeled concentration	CAAQ 1-hr std (ppb)	Exceed CAAQS?	NAAQ 1-hr std (ppb)	Exceed NAAQS?
	East	North										
PROPERTY	316195.60000	3970673.00000	1.095622	0.558082456	ROG	16113 (ozone surrogate)	43.17	43.72	90	No	-	N/A
PROPERTY	316195.60000	3970673.00000	8.388372	7.322231182	CO	42101	307.04	314.36	9000	No	9000	No
PROPERTY	316195.60000	3970673.00000	7.517464	3.994827098	NOx	42603 (NO2 surrogate)	16.17	20.16	180	No	100	No
PROPERTY	316195.60000	3970673.00000	0.03095682	0.011813552	Sox	42401 (SO2 surrogate)	0.83	0.85	250	No	75	No

GRP	UTM		Average Concentration $\mu g/m^3$	Pollutant	Pollutant Id (AERMOD)	Background Concentration ($\mu g/m^3$)	Background + Max Modeled concentration	CAAQ Annual std (ppb)	Exceed CAAQS?	NAAQ Annual std (ppb)	Exceed NAAQS?
	East	North									
PROPERTY	311714.00000	3974252.00000	0.03774016	PM10	85101 (PM10)	56.92	56.96	20	Yes	-	N/A
PROPERTY	311714.00000	3974252.00000	0.008474587	PM2.5	88101 (PM2.5)	26.25	26.26	12	Yes	12	Yes

Notes:

1. Only the maximum modeled concentration at the fenceline is displayed, however all modeled fencline concentrations (over 2,000 modeled points) were evaluated for each criteria pollutant.
2. Standards for ozone, carbon monoxide, nitrogen dioxide, and sulfur dioxide are reported in ppb. Particulate matter is reported in $\mu g/m^3$
3. Concentrations of criteria pollutants was determined at property line receptors via AERMOD; results are conservative and do not include incorporation of fugitive dust control measures that would be required per Rule VIII
4. For ROG,CO, NO_X, and SO_X the max 1-hr concentration at the property line receptors was compared to the 1-hr state and federal standard. For PM_{10} and $PM_{2.5}$ the period average concentration was compared to the annual state and federal standard.
5. Background concentration of each pollutant was determined as the average daily concentration during 2018 given the max and min concentration measured. Data was obtained from CARB's Air Quality and Meterological Information (AQMIS) data base for Tulare County. CO data not available for Tulare County therefore data is from Kern County. SO2 data not available for Tulare County or Kern County, therefore SJV Basin values used.

Rexford Solar Project - 700 MW

Displaced Energy Production during 30-year Project life

Annual Energy Production	
Grid Size (MW)	700
Total hrs/year	8760
% Operational time [1]	*26%*
Operational hours/year	2,237
KWh produced per year	1,566,215,000
Assumed Heat Rate (Btu/KWh)	10,000
Annual Fuel Equivalent (MMBtu)[2]	15,662,150

California Power Mix[3]		Annual Fuel Displacement (MMBtu)
Coal[4]	4.13%	646,847
Large Hydro	14.72%	2,305,468
Natural Gas[4]	33.67%	5,273,446
Nuclear	9.08%	1,422,123
Oil	0.01%	1,566
Other (petroleum coke/waste heat)	0.14%	21,927
Renewables	29.00%	4,542,024
Unspecified sources of Power	9.25%	1,448,749
Total	**100.00%**	**15,662,150**

Annual Pollutant Displacement[4]

Natural Gas Turbine Emissions

Pollutant	AP-42 Emission Factor (lb/MMBtu)[5]	Controlled Emission Factor (lb/MMBtu)	Controlled Emissions (lb)	Controlled Emissions (ton)	AP-42 Emission Factor Source Notes[5]
NO_2	0.099	0.099	522,071	261.04	Table 3.1-1, lean premix; Assume SCR Control Efficiency
CO	0.015	0.015	79,102	39.55	Table 3.1-1, lean premix; Assume Ox. Cat. Control Efficiency
PM_{10}	0.0047	0.0047	24,785	12.39	Table 3.1-2a, PM (condensible)
$PM_{2.5}$	0.0019	0.0019	10,020	5.01	Table 3.1-2a, PM (filterable)
SO_2	0.0034	0.0034	17,930	8.96	Table 3.1-2a
CO_2	110	110	580,079,050	290,039.52	Table 3.1-2a

Coal Combustion Emissions

Pollutant	AP-42 Emission Factor (lb/ton)[6]	Controlled Emission Factor (lb/ton)	Emissions (lb)[7]	Emissions (ton)	AP-42 Emission Factor Source Notes[6]
NOx	12	12	323423	161.71	Table 1.1-3 pulverized coal, wall fired, bituminous coal NSPS
CO	0.5	0.5	13476	6.74	Table 1.1-3 pulverized coal, wall fired, bituminous coal NSPS
PM_{10}[8]	0.46	0.084	2264	1.13	Table 1.1-4, PC-fired dry bottom wall-fired, scrubber control
$PM_{2.5}$[8]	0.12	0.06	1617	0.81	Table 1.1-4, PC-fired dry bottom wall-fired, scrubber control
SO_2[9]	2.85	0.57	15363	7.68	Table 1.1-3 pulverized coal, wall fired, bituminous coal NSPS
CO_2	6040	6040	162789777	81,394.89	Table 1.1-20
Total NMHC	0.06	0.06	1617	0.81	Table 1.1-19; assumed all hydrocarbons are reactive
CH_4	0.04	0.04	1078	0.54	Table 1.1-19
N_2O	0.03	0.03	809	0.40	Table 1.1-19

Total Displaced Emissions Associated With Direct Combustion

Pollutant	tons/year[8]	tons/lifetime (30 years)
ROG (NMHC)	0.81	24.26
NO_X	422.75	12,682.42
CO	46.29	1,388.66
PM_{10}	13.52	405.74
$PM_{2.5}$	5.82	174.55
SO_X	16.65	499.38
CO_2E	337,070.51	10,112,115.42

Notes:

1. Operational time is based on annual average solar radiation hours per day per year (6.13) for the project area. Source: National Renewable Energy Laboratories, U.S. Department of Energy (https://pvwatts.nrel.gov/pvwatts.php)
2. The Project is assumed to displace existing power generation equivalent to the current power mix(each year of operation.
3. California Power Mix assumptions are based on data from Total California Electrical System Power (http://www.energyalmanac.ca.gov/electricity/total_system_power.html).
4. Combustion of natural gas and coal for power are of the greatest concern related to the generation of criteria pollutants and GHG emissions, therefore only fuel displacement of natural gas and coal due to electricty production from the Rexford Solar facility are considered in this assessment.
5. EPA Air Pollution Emission Factors AP-42 Section 3.1, Stationary Gas Turbines
6. EPA Air Pollution Emission Factors AP-42 Section 1.1, Bituminous and Subbituminous Coal Combustion
7. Coal characteristics used for conversion: Assumed coal heat content = 24 MMBtu/ton
8. Total particulate matter (CPM-TOT) is expressed in terms of coal ash content therefore emission factor is determined by multiplying % ash content of coal (assumed to be 20% herein) by value listed in Table 1.1-4. Organic fraction of particulate matter is 20% of total CPM-TOT (Table 1.1-5) and listed as controlled emission factor.
9. SO_x emission factor calculated by multiplying the weight percent of sulfur (assumed to be 7.5%) by the value listed in Table 1.1-3
10. CO_2E volumes are in metric tons rather than short (US) tons

Appendix HRA

Health Risk Assessment Data

Toxic Air Contaminant Health Risk Analysis

Carcinogenic

Cancer Health Risk

Dose [air] = Concentration [air] * DBR * Absorption * EF * 10^-6

Risk = Dose * Cancer Potency * ASF * FAH * (ED/AT)

Where:

DBR =	Daily Breathing Rate normalized to body weight for age class (L/kg BW-day)
A =	Absorption - assumed to be 1.0 (100%)
EF =	Exposure Frequency = days present/365 days Usually 0.96 (350/365 to account for 2 week vacation)
ASF =	Age Sensitivity Factor
FAH =	Fraction of Time at Home
ED =	Exposure duration in years
AT =	Averaging time (always 70 yrs)

Construction Duration: 27 months

Construction & Deconstruction *54 months*

	Age Bin						
	3rd trimester	0<2 yrs	2<9 yrs	2<16 yrs	16<30 yrs	16-70 yrs	
DBR =	361	1090	861	745	335	290	*Note: 95 percentile*
A =	1.0	1.0	1.0	1.0	1.0	1.0	
EF =	0.96	0.96	0.96	0.96	0.96	0.96	
ASF =	10	10	3	3	1	1	
FAH =	0.85	0.85	0.72	0.72	0.73	0.73	
ED =	0.25	2.00	2.25	2.25	2.25	2.25	Construction Only
ED =	*0.25*	*2.00*	*4.50*	*4.50*	*4.50*	*4.50*	*Construction and Deconstruction*
AT =	70	70	70	70	70	70	
Cancer Risk Factor:	1.05E-05	2.54E-04	5.74E-05	4.97E-05	7.55E-06	6.53E-06	Construction Only
Cancer Risk Factor:	*1.05E-05*	*2.54E-04*	*1.15E-04*	*9.93E-05*	*1.51E-05*	*1.31E-05*	*Construction and Deconstruction*

Methodology Source: *California EPA, Office of Environmental Health Hazard Assessment (February 2015). Air Toxics Hot Spots Program Risk Assessment Guidelines - The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.*

NonCarcinogenic

Risk Equation

Hazard Quotient = Concentration/Chronic Inhalation Reference Exposure Level

Hazard Index = Sum of all Hazard Quotients (HQs)

Risk Calculation For Residents

TAC: Diesel Engine Exhaust Particulate Matter

Cancer Potency, Inhl (mg/kg-day)^-1	1.10E+00	Cancer Slope Factor per OEHHA Appendix A: Hot Spots Unit Risk and Cancer Potency Values; http://oehha.ca.gov/air/hot_spots/tsd052909.html
Chronic Inhalation REL, ug/cu m	5.0E+00	Chronic Inhalation REL as of June 2014; http://www.oehha.ca.gov/air/Allrels.html

Construction Only (27 months of exposure out of 70 years)

Receptor	RECEPTOR ID	GRP	UTM east	UTM north	Concentration, ug/cu m	Carcinogenic Risk By Age Group: 3rd trimester	0<2 yrs	2<9 yrs	2<16 yrs	16<30 yrs	16-70 yrs	Summed Lifetime Carcinogenic: 30 Year Resident	70 Year Resident	Chronic Risk HQ
PMI (fenceline)	1507	PROPERTY	311714	3974252	3.92E-03	4.54E-08	1.10E-06	2.48E-07	2.14E-07	3.26E-08	2.82E-08	1.39E-06	1.38E-06	7.85E-04
MEIR (off-site)	1135	SENSITIV	316341	3970517	6.52E-04	7.55E-09	1.82E-07	4.12E-08	3.56E-08	5.41E-09	4.69E-09	2.31E-07	2.30E-07	1.30E-04

Construction and Deconstruction (54 months of exposure out of 70 years)

Receptor	RECEPTOR ID	GRP	UTM east	UTM north	Concentration, ug/cu m	Carcinogenic Risk By Age Group: 3rd trimester	0<2 yrs	2<9 yrs	2<16 yrs	16<30 yrs	16-70 yrs	Summed Lifetime Carcinogenic: 30 Year Resident	70 Year Resident	Chronic Risk HQ
PMI (fenceline)	1507	PROPERTY	311714	3974252	3.92E-03	4.54E-08	1.10E-06	4.95E-07	4.29E-07	6.51E-08	5.64E-08	1.64E-06	1.63E-06	7.85E-04
MEIR (off-site)	1135	SENSITIV	316341	3970517	6.52E-04	7.55E-09	1.82E-07	8.23E-08	7.12E-08	1.08E-08	9.37E-09	2.72E-07	2.70E-07	1.30E-04

APPENDIX D
BIOLOGICAL RESOURCES

APPENDIX D.1
BIOLOGICAL RESOURCES ASSESMENT

Rexford Solar Farm Project

Biological Resources Assessment

prepared for

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5455 Wilshire Boulevard, Suite 2010
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Contact: Venai Shenoy
Via email: vshenoy@8minute.com

prepared by

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January 2020

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Executive Summary

This document provides the findings of a Biological Resources Assessment prepared by Rincon Consultants, Inc. (Rincon) for the proposed Rexford Solar Project (Project). 20SD 8ME, LLC proposes to construct and operate a 700 megawatt-alternating current (MW-AC) photovoltaic energy facility and energy storage system. Power generated by the Project would be collected using up to 230 kilovolt collector lines which run overhead and/or underground to a dedicated Project substation and would then connect to the Southern California Edison (SCE) Vestal Substation via an overhead and/or underground generation tie-line. The report documents existing conditions at the Project area and provides an assessment of potential impacts to sensitive biological resources based upon proposed Project plans.

The Project area is located in the San Joaquin Valley, immediately west of the Sierra Nevada foothills in unincorporated Tulare County, near the town of Ducor, California. The defined Project Area for this analysis includes approximately 3,620 acres of private lands in Tulare County, California, including 11.3 miles of gen-tie/collector line corridor.

No sensitive plant communities are located within the Project Area and no regional wildlife linkages or corridors are mapped within the Project Area. A small section of CDFW Natural Landscape Block overlaps the eastern edge of a parcel within the Project area. Project implementation would not interfere with the provisions of any applicable adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, potential Project impacts to these sensitive resources would be less than significant.

Rincon assessed the potential for 44 special status species (20 plant species and 24 wildlife species) to occur in the Project area. One special status plant species, the San Joaquin adobe sunburst (*Pseudobahia peirsonii*) has low potential to occur in the Project Area. Ten special status wildlife species have some potential to occur in the Project Area, and four were observed in the Project Area. Four (4) species listed as threatened or endangered by state or federal regulations have a low potential to occur in the Project Area: 1) San Joaquin kit fox *(Vulpes macrotis mutica)*; 2) Swainson's hawk *(Buteo swainsoni)*; 3) vernal pool fairy shrimp (*Branchinecta lynchi)*; and 4) valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Two (2) non-listed special status species have a low potential to occur in the Project area based on the presence of potentially suitable habitat: burrowing owl (*Athene cunicularia*) and western spadefoot (*Spea hammondii*). Four special status species were observed during the reconnaissance surveys on October 8 and 9, 2019, or during the jurisdictional delineation on October 16 and 17, 2019: 1) Cooper's hawk (*Accipiter cooperii*); 2) northern harrier (*Circus hudsonius*); 3) white-tailed kite (*Elanus leucurus*); and 4) prairie falcon (*Falco mexicanus*).

No sensitive natural communities were observed in the Project Area; however, potentially jurisdictional features (under the California Department of Fish and Wildlife or Regional Water Quality Control Board), including an intermittent stream, ephemeral drainages, and isolated seasonal wetlands were mapped. These aquatic resources, along with areas mapped as fallow agricultural fields, fence-lines and peripheral edges of roadways and fields provide potentially suitable habitat for special status species within the Project Area, however most of the Project Area consists of agricultural lands disturbed by disking, grazing, or plowing.

As a result of the proposed Project, sensitive species (including nesting birds) on-site could be impacted directly (loss of or injury to individuals, disturbance of breeding activities) or indirectly (construction noise, erosion, and other human disturbances). Jurisdictional wetlands could also be impacted indirectly (runoff). These impacts would be potentially significant but can be reduced to less than significant through implementation of proposed mitigation measures.

1 Introduction

Rincon Consultants, Inc. (Rincon) has prepared a Biological Resources Assessment for the 20SD 8ME, LLC Solar Energy Rexford Solar Farm Project (Project). The proposed Project would include multiple parcels of land encompassing approximately 3,140 acres in southern Tulare County, herein referred to as the "Project Area." The permanent disturbance acreage associated with development of the solar facility and associated infrastructure (Project Site) within the Project Area would be less than the gross acreage of the Project Area. The site is zoned Valley Agricultural under the Tulare County General Plan.

This report has been prepared for 20SD 8ME, LLC (Client). This report may be used and relied upon by the Client, any entity that has an ownership interest in this Client, any of the Client's subsidiaries and/or affiliates, and any successor in interest to Client's interest in the Project.

1.1 Project Location and Study Area

The Project is in the San Joaquin Valley, immediately west of the Sierra Nevada foothills, in the vicinity of the community of Ducor, Tulare County, California (Figure 1). The Project is located in the *Ducor* and *Richgrove* U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles (Figure 2). The approximate center of the Project is at latitude 35 52'22" N and longitude 119 02'51" W. The Public Lands Survey System maps the area as Township 23 south, Range 27 east, Sections 20-23, and 25-36; Township 23 south, Range 28 east, Sections 30, 31; and Township 24 south, Range 27 east, Sections 01- 04, 08-11, 15-22, and 27-29. The site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered residential buildings.

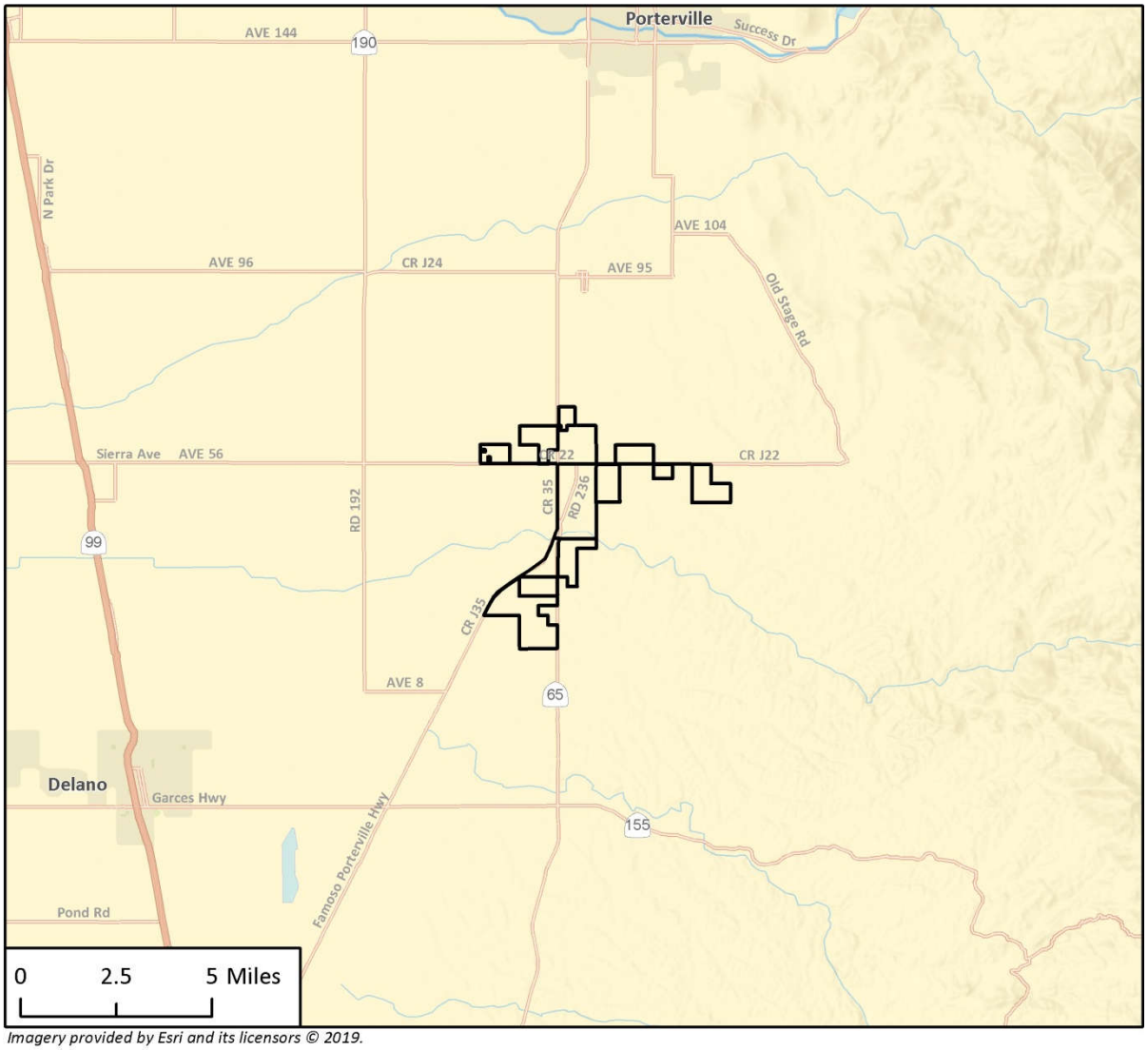
The study area for this project is defined as the parcels making up the 3,620 acres (Project Area) and the 11.3 miles of gen-tie/collector line corridor (Figure 2). Project Site is defined as areas where structures and equipment will be installed and contained by fencing. The Project Site will include permanent impacts within the Project Area and will make up total acreage smaller than that of the Project Area, yet to be determined.

1.2 Project Description

The Project proposes the construction and operation of solar photovoltaic facilities on approximately 3,620 acres of property historically used as agricultural farmland in Tulare County, California, including 11.3 miles of gen-tie/collector line corridor, as shown in Figure 2.

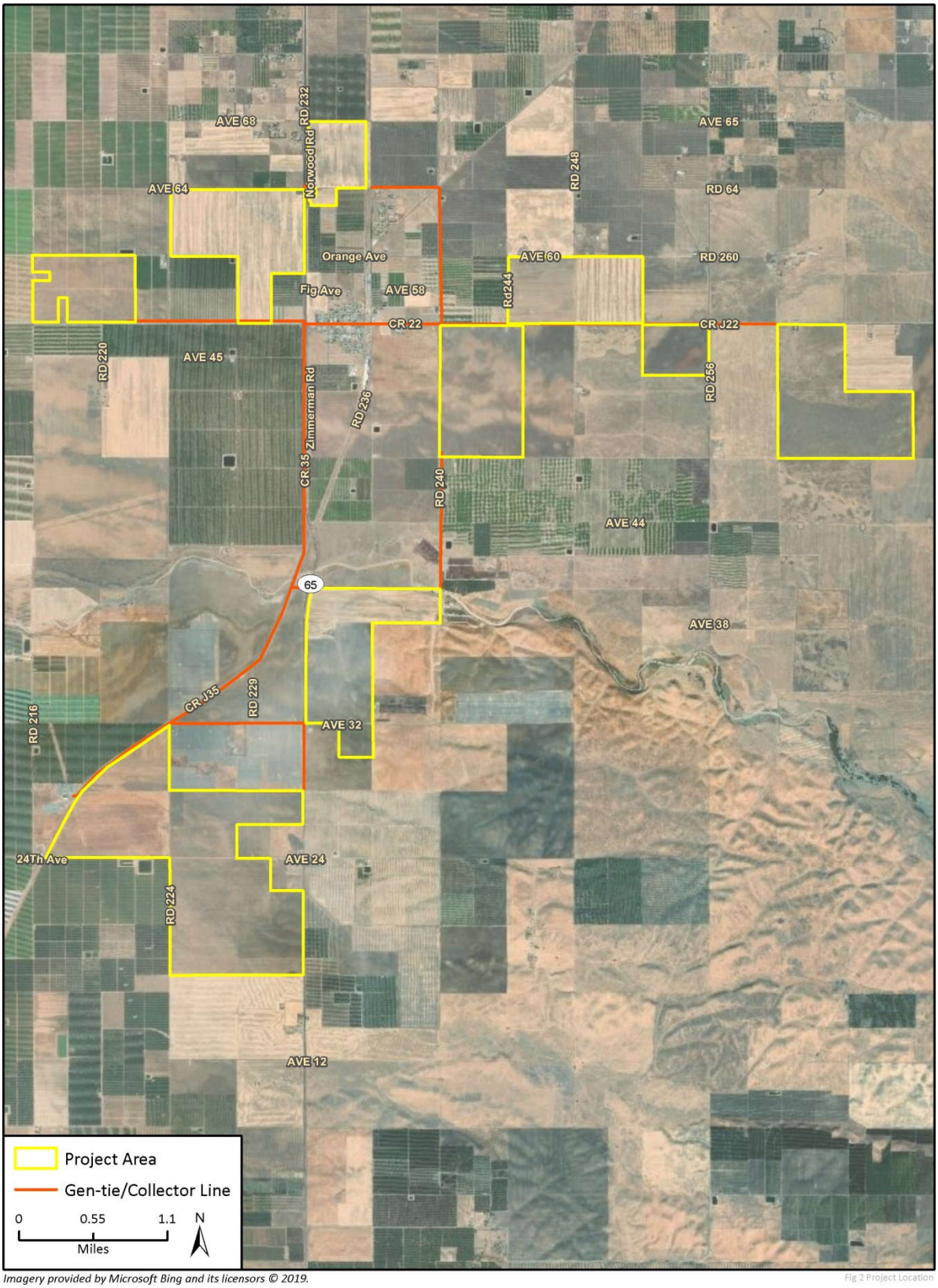
The proposed Project consists of a photovoltaic (PV) energy facility and energy storage system (ESS) within the Project Area capable of producing up to 700 megawatts (MW) of alternating current (AC) power and up to 700 MW-AC of storage capacity. Power generated by the Project would be collected using up to 230 kV collector lines which run overhead and/or underground to a dedicated Project substation and would then connect to the Southern California Edison (SCE) Vestal Substation (Vestal) via an overhead and/or underground generation tie lie (gen-tie line).

Figure 1 Regional Location Map



Imagery provided by Esri and its licensors © 2019.

Figure 2 Project Footprint



The Project would use PV panels or modules on mounting frameworks. Individual panels would be installed on either fixed-tilt or tracker mount systems (single- or dual-axis, using galvanized steel or aluminum). Panels are expected to remain between 6' and 8' high. The solar panel array would be arranged in groups called blocks, with inverter stations generally located centrally within the blocks. Inverter stations are typically comprised of one or more inverter modules with a rated power of up to 5 MW each, a unit transformer, and voltage switch gear. The unit transformer and voltage switch gear are housed in steel enclosures, while the inverter module(s) are housed in cabinets. Depending on the vendor selected, the inverter station may lie within an enclosed or canopied metal structure, typically on a skid or concrete mounted pad. The foundations for the mounting structures can extend up to 10 feet below ground and may be encased in concrete or use small concrete footings. A light-colored ground cover or palliative may be used to increase electricity production.

The Project may include one or more ESS, located at or near a substation/switchyard (onsite or shared) and/or at the inverter stations, or elsewhere onsite. ESSs consist of modular and scalable battery packs and battery control systems that conform to U.S. national safety standards. The ESS modules, which could include commercially available lithium or flow batteries, typically consist of Independent System Operator (ISO) standard containers (approximately 40'L x 8'W x 8'H) housed in pad- or post-mounted, stackable metal structures, but may also be housed in a dedicated building(s) in compliance with applicable regulations. The maximum height of a dedicated structure is not expected to exceed 25 feet. The Project may share an ESS with one or more nearby or future solar projects or may operate one or more standalone ESS facilities within the Project Site.

Output from the inverter stations would be transferred via electrical conduits and electrical conductor wires to one or more Project substations or switchyards, and then onward via an up to 230kV dedicated gen-tie line to the SCE Vestal Substation. The Project and any associated ESS would have their own dedicated substation equipment located within the Project Site. Dedicated equipment may incorporate several components, including auxiliary power transformers, distribution cabinets, revenue metering systems, a microwave transmission tower, and voltage switch gear. Each substation would occupy an area of up to approximately five acres, secured separately by a chain-link fence. Substations typically include a small control building (approximately 10 feet high and 500 square feet in area) constructed of prefabricated concrete or steel housing.

The Project may include an operations and maintenance (O&M) building with associated on-site parking. The building would be steel framed with metal siding and roof panels, and approximately 40' x 80' in size. The O&M building would be steel framed with metal siding and roof panels. One or more above-ground water storage tanks with a total capacity of up to 50,000 gallons may be placed on-site near the O&M building.

The Project Site would be enclosed within a chain link fence with barbed wire measuring up to 8 feet in height from finished grade. Project Site lighting would be directed away from public rights-of-way. Lighting used on-site would be minimal. Site lighting may include motion sensor lights for security purposes. Lighting used on-site would be of the lowest intensity foot candle level, in compliance with any applicable regulations, measured at the property line after dark. No roadways would be affected by the Project, except as used for worker access during the construction period.

2 Methodology

2.1 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and animal species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by Federal, State, and local authorities. Primary authority for regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, Tulare County).

2.1.1 Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Tulare County General Plan

2.1.2 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed Project would have a significant effect on biological resources if it would:

a) *Have substantial adverse effects, 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, and regulations or by the California Department of Fish and Wildlife or US 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.

2.2 Literature Review

Rincon reviewed relevant agency databases and literature for baseline information on biological resources potentially occurring within the *Ducor, California* and *Richgrove, California* U.S. Geological Survey (USGS) 7.5-minute quadrangles and surrounding ten quadrangles The review included information available in peer-reviewed journals, standard reference materials (e.g., Bowers et al. 2004; Burt and Grossenheider 1980; Holland 1986; Sawyer et al. 2009; Stebbins 2003), and agency and public databases containing special status biological resources occurrences, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB, CDFW 2019a), the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2019), the Biogeographic Information and Observation System (BIOS, CDFW 2019b), the U.S. Fish and Wildlife Service (USFWS) Information for Consultation and Planning (IPaC, USFWS 2019a), and the USFWS Critical Habitat Portal (USFWS 2019b). The Special Animals List (CDFW 2019c), the Special Vascular Plants List (CDFW 2019d), eBird (2019), as well as the CDFW Wildlife Habitat Relationship System (Zeiner et al. 1988) were also reviewed to account for other special-status species not tracked by CNDDB with potential to occur in the vicinity of the Project. Other sources of information about the Project that were reviewed included aerial photographs, topographic maps, soil survey maps, geologic maps, and climatic data.

The vegetation community characterizations for this analysis were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* ([MCV2] Sawyer et al. 2009) but have been modified slightly to most accurately reflect the existing site conditions. The *Preliminary Description of Terrestrial Natural Communities of California* (Holland 1986) has been superseded by the MCV2 but is included for reference. Plant species nomenclature and taxonomy used for this BRA follows the treatments within the second edition of The *Jepson Manual* (Baldwin et al. 2012).

2.3 Field Reconnaissance Survey

Rincon biologists Anastasia Ennis and Samantha Kehr conducted a field reconnaissance survey of the Project Area on October 8 and 9, 2019. Project Area. Surveys were conducted after a review of aerial photographs and other resources. The reconnaissance survey focused on field- verifying and refining desktop mapping of land cover types and vegetation communities within the Project Area, evaluating the condition of habitats present on site, and assessing the Project Area for the potential to support special status species and other sensitive biological resources. Rincon documented trees of sufficient size to support raptor nests within ½ mile of the Project Area. Results of the survey were used support the evaluation of project impacts on existing biological resources.

On October 8, windshield surveys were conducted between the hours of 0900 and 1600. All parcels and gen-tie/collector line corridors were scanned with the aid of 10x42 binoculars. Temperatures ranged from 63 to 90° F. On October 9, meandering pedestrian surveys were conducted in sites that had variations in topography, hydrology, vegetation communities, or biological features between the hours of 0700 and 1540. Temperatures ranged from 60 to 88° F. Rincon conducted pedestrian surveys for all areas mapped as fallow agricultural fields and on parcels where potentially jurisdictional isolated seasonal wetlands, ephemeral drainage, the White River or other potential natural habitat had been identified during initial desktop review of aerial imagery.

A jurisdictional delineation was conducted on October 16 and 17, 2019, and January 7, 2020 to evaluate aquatic resources within the Project Area. A summary of the results of the jurisdiction delineation are presented in Section 4.3 and fully reported under a separate cover (Aquatic Resources Assessment, Rincon 2020).

3 Existing Conditions

3.1 Physical Characteristics

The San Joaquin Valley (Valley) comprises the southern two-thirds of the Central Valley of California. It is situated between the Sierra Nevada Mountains to the east, the Diablo and Temblor Ranges (Coast Ranges) to the west, and the Tehachapi Mountains to the south. The Valley occupies a trough created by tectonic forces related to the collision of the Pacific and North American Plates. The Project Area is located in Tulare Basin in the southeastern portion of the Valley, in an area that consists predominantly of flood plains, alluvial fans, fan terraces, dunes, and low and high terraces (USDA 2006). Elevations within the Project Area range from 475-670 feet (145-205 meters) above mean sea level (msl). The region immediately surrounding the Project Area consists of current and past agricultural activities and human-related disturbances, such as dirt roads and scattered residential development.

3.1.1 Watershed and Drainages

The Project is located in Tulare Basin, which drains approximately 16,400 square miles (US EPA 2007). The lowland areas of Tulare Basin make up the southern half of the San Joaquin Valley. Prior to diversion of water for irrigation, water from the Tulare Basin watershed would flow into the San Joaquin River during high flows and flood events. The Kings, Kaweah, Tule and Kern Rivers are the four main drainages in the basin that historically terminated in Tulare Lake. Diversion of waters through a system of dams, canals, and water detention centers prevents most outflow from these rivers from reaching their natural terminus. The White River, a minor seasonal stream in the Tulare Basin, crosses through one of the parcels in the central portion of the Project along Road 240, approximately two miles south of Ducor (USGS 2019). The White River is 50.7 miles long and drains 91 square miles. It collects seasonal runoff, draining the Greenhorn Mountains between the Tule and Kern Rivers. (USGS 2019; US EPA 2007). Historically, the White River drained into Tulare Lake. Ephemeral drainages and isolated seasonal wetlands are present on site and are discussed in Section 4.3 of this document, as well as evaluated in a separate document, the Aquatic Resources Assessment (Rincon 2020).

3.1.2 Soils

The soils in the San Joaquin Valley formed predominantly on alluvial fans and terraces, with parent material derived from granitic and sedimentary rock from the Coast Ranges to the west, and the Sierra Nevada Mountains to the east. According to data available from the USDA and National Cooperative Soil Survey [NCSS] Web Soil Survey (USDA NRCS 2019a), sixteen soils belonging to nine soil series are mapped underlying the Project Area including:

- Centerville clay, 15 to 30 percent slopes
- Centerville clay, 2 to 5 percent slopes*
- Centerville clay, 2 to 9 percent slopes
- Colpien loam, 0 to 2 percent slopes
- Delvar clay loam, 2 to 9 percent slopes*

- Exeter loam 0 to2 percent slopes*
- Exeter loam 2 to 5 percent slopes
- Exeter loam 2 to 9 percent slopes*
- Flamen loam, 0 to 2 percent slopes*
- Greenfield sandy loam, 0 to 2 percent slopes
- Greenfield sandy loam, 2 to 5 percent slopes
- Porterville clay, 0 to 2 percent slopes*
- Porterville clay, 2 to 9 percent slopes*
- Riverwash*
- San Joaquin loam 0 to 2 percent slopes
- Yettem sandy loam, 0 to 2 percent slopes*

Soil distribution within the Project Area is depicted in Figure 3 and the soil series are described in more detail below. The nine hydric soil types found in the area are indicated with an asterisk above (USDA 2019b). The following soil series descriptions are summarized from soil series descriptions available on the NRCS website.

Centerville Series

Centerville soils are well-drained and formed in alluvium from mostly granitic sources. This soil series is found on alluvial fans and dissected stream terraces with slopes of 0 to 30 percent at elevations of 25 to 2100 feet. These moderately alkaline soils have slow permeability and are used mainly for irrigated oranges and dryland barley, wheat, and rangeland. In uncultivated areas, vegetation is annual grasses and forbs.

Colpien Series

Colpien soils are very deep, moderately well-drained, and found on terraces that formed in alluvium from mostly granitic rock. This soil series has slopes of 0 to 2 percent at elevations of 220 to 550 feet. These soils are neutral to moderately alkaline, have moderately slow permeability and are used as irrigated cropland to grow a variety of crops and produce, dairy and cattle production, and building site development.

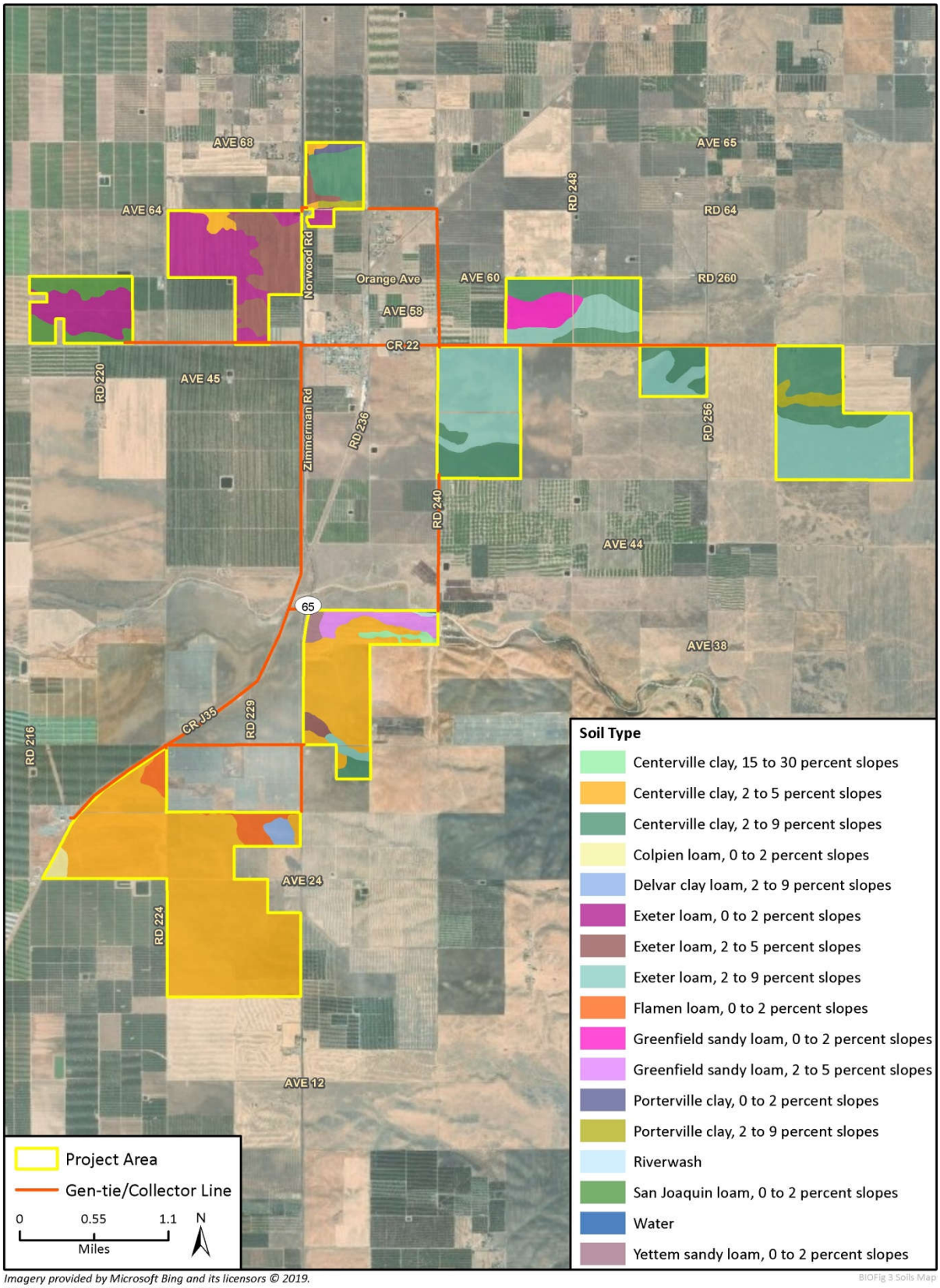
Delvar Series

Delvar soils are very deep, well-drained and formed in mixed alluvium from granitic and meta-sedimentary rock. This soil series is found on alluvial fans and stabilized floodplains with slopes of 2 to 30 percent at elevations of 400 to 2000 feet. These slightly acidic to moderately alkaline soils have slow permeability and are used and are used for irrigated crops and dryland grain, dairy and cattle production, and building site development.

Exeter Series

Soils in the Exeter series are moderately deep to a duripan, well-drained, and formed in alluvium from mainly granitic sources. This soil series is found on alluvial fans and stream terraces floodplains with slopes of 0 to 9 percent at elevations of 20 to 700 feet. These soils range from slightly acidic to moderately alkaline and have slow permeability and are irrigated to grow a variety of crops and

Figure 3 Soils Mapped within the Project Area



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Additional data provided by SSURGO, 2019.

BIOFig 3 Soils Map

produce. Exeter soils are also used for dairy and cattle production and building site development. Native vegetation is mainly annual grasses and forbs.

Flamen Series

Soils in the Flamen series are moderately deep to a duripan, moderately well-drained, and formed in alluvium from mainly granitic sources. Flamen soils are well-drained and formed in alluvium from mostly sedimentary rock. This soil series is found on stream terraces and have slopes of 0 to 2 percent at elevations of 260 to 550 feet. These slightly acidic to moderately alkaline soils have moderate permeability above the duripan and are used for irrigated crops and orchards, dairy and cattle production, and building site development.

Greenfield Series

Greenfield soils are deep, well-drained and formed in coarse alluvium from granitic and mixed rocks. This soil series is found on alluvial fans and terraces with slopes of 0 to 30 percent at elevations of 300 to 850 feet. These mildly alkaline soils have moderately rapid permeability and are used for a variety of field, forage, and fruit crops, along with dryland grain and pasture. In uncultivated areas shrubs and oaks.

Porterville Series

Porterville soils are deep, well-drained and formed in fine alluvium from basic and metabasic igneous rock. This soil series is found on fans foothills with slopes of 0 to 15 percent. At elevations ranging from below 2000 feet and over 4500 feet, these neutral to moderately alkaline soils have slow permeability and are used mainly for range pasture, although irrigated orchards are sometimes planted. Native vegetation includes annual grasses, burclove, herbs, and sparse shrubs.

Riverwash

Riverwash consists of recent deposits of gravel, sand, and silt alluvium along streams and tributaries During floods, these alluvial materials can shift readily, responding to processes of erosion and deposition.

San Joaquin Series

Soils in the San Joaquin series are moderately deep to a duripan, moderately well to well-drained, and formed in alluvium from mixed but dominantly granitic sources. This soil series is found on undulating low terraces with slopes of 0 to 9 percent at elevations of 20 to 500 feet. These moderately acidic to moderately alkaline soils have very slow permeability and are used mainly for grazing, growing of small grains and rice, as well as fruits, nuts, and vineyards.

Yettem Series

Yettem soils are very deep, well-drained, and formed in alluvium from granitic sources. This soil series is found on alluvial fans and floodplains with slopes of 0 to 5 percent at elevations of 225 to 1500 feet. These slightly acidic soils have moderately rapid permeability and are used for annual pasture and crops such as oranges, plums, olives, walnuts, and grapes. In uncultivated areas these soils support annual grasses and forbs. A typical soil profile includes several layers of sandy loam of various types, loamy sand, or gravelly equivalents of each.

3.2 Vegetation and Other Land Cover

Vegetation types in the San Joaquin Valley have been significantly modified and disturbed by anthropogenic activity. The region once consisted of a diverse assemblage of perennial bunchgrass ecosystems that included a variety of vegetation communities and mosaic of habitats including prairies, oak-grass savannas, desert grasslands, riparian woodlands, freshwater marshes, alkali sink, and vernal pools. Extensive agricultural and urban/suburban development during the 19th and 20th centuries has resulted in substantial modification to virtually all of the Central Valley's habitats. Grasslands in the region are now dominated by introduced non-native grasses and most wetlands and lakes have been drained to support the extensive irrigation infrastructure of the Valley. In general, agricultural development, urban expansion and changes to the hydrologic regimes have resulted in a loss of the majority of natural habitats and native vegetation communities.

The Project Area is comprised of active agricultural fields (containing crops, recently disked, or used as pasture land), fallow agricultural fields (fields in state of reversion back to non-native grassland), and developed areas (roads, agricultural infrastructure, and houses) (Figure 4a-c; see Appendix B for site photographs). The Project Area consists almost exclusively of agricultural fields used for dry-land agricultural production of winter wheat (*Triticum aestivum*). Mapped as Agricultural Fields, these grain-dominated fields are also used as pasture for sheep and cattle and include ruderal species that have grown around field margins and spread throughout grain fields after crops were last harvested.

Rincon biologists mapped fallow agricultural fields in only one location in the southwest of the Project Area (Figure 4c). Although there are signs of sheep-grazing in this location and evidence of a fire at the southwestern edge along Richgrove Road, these fields have not been planted or disked in more than a year and are reverting to non-native grassland. Areas mapped as developed in the Project Area include roads along gen-tie/collector line corridors, rural residential building and barns, and agricultural storage structures.

Two natural vegetation communities and six land cover types were documented within the Project Area: 1) Fallow agricultural field; 2) Agricultural fields (grain/ruderal); 3) Developed; 4) Intermittent stream; 5) Ephemeral drainage; 6) Basin; 7) Isolated seasonal wetland; and 8) Irrigation ditch. (Figure 4a-d). The two vegetation communities represent a small portion of the Project Area and were defined based on their dominant perennials and those annuals that could be identified. Brief descriptions of the natural vegetation communities and the other land cover types are presented below. A full compendium of species observed within the Project Area during the reconnaissance surveys is presented in Appendix C.

Fallow Agricultural Field

The Project Area contains approximately 249 acres of fallow agricultural fields. The dominant species observed in this community are non-native annual grasses such as brome (*Bromus* sp.) and wild oats (*Avena* sp.). This community most closely resembles the *Avena* (*barbara, fatua*) Semi-Natural Herbaceous Alliance described by Sawyer et al. (2009). This vegetation community occurs within three parcels in the southwest of the Project Area as shown on Figure 4c.

Figure 4a Land Cover Map

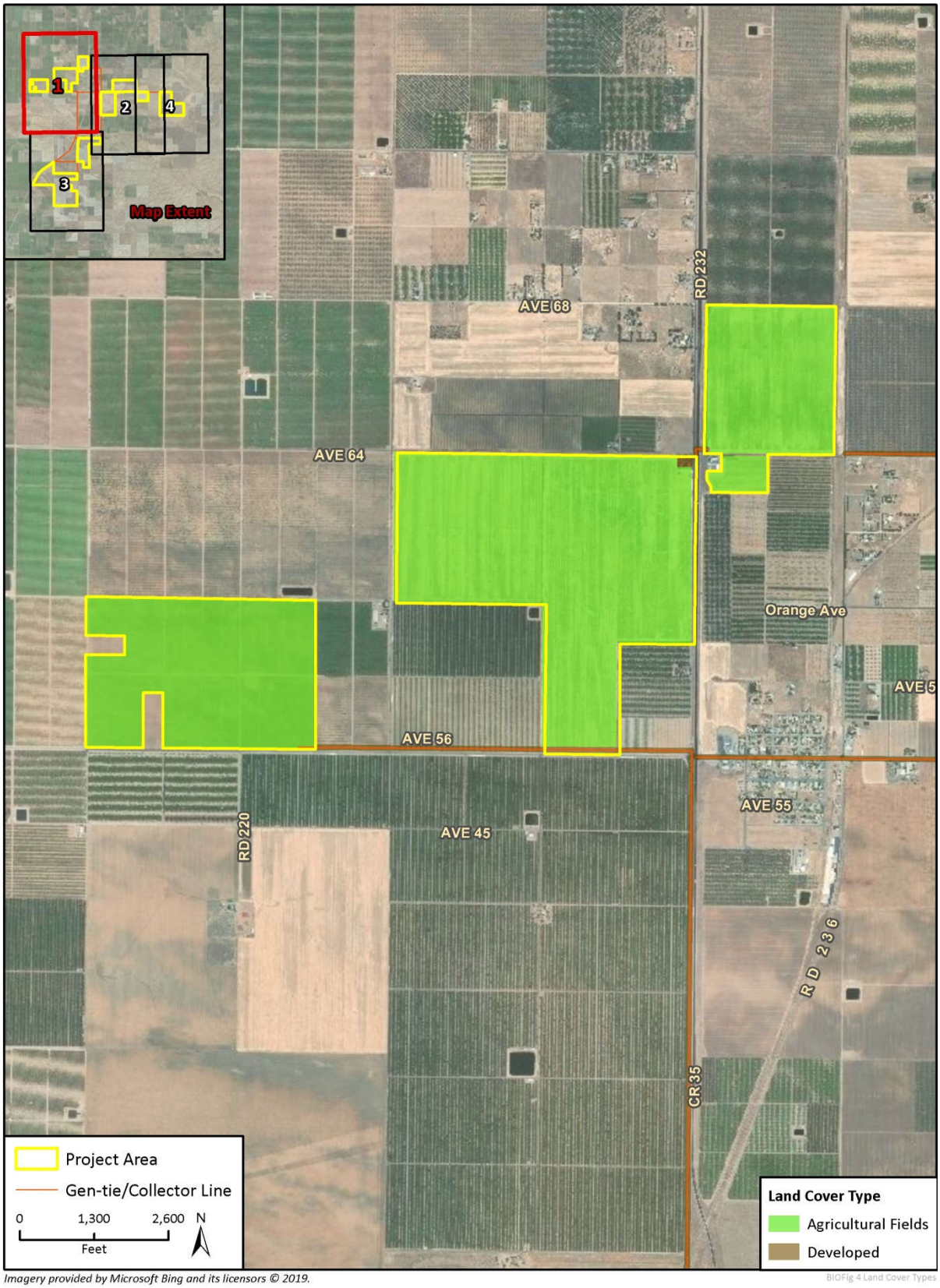


Figure 4b Land Cover Map

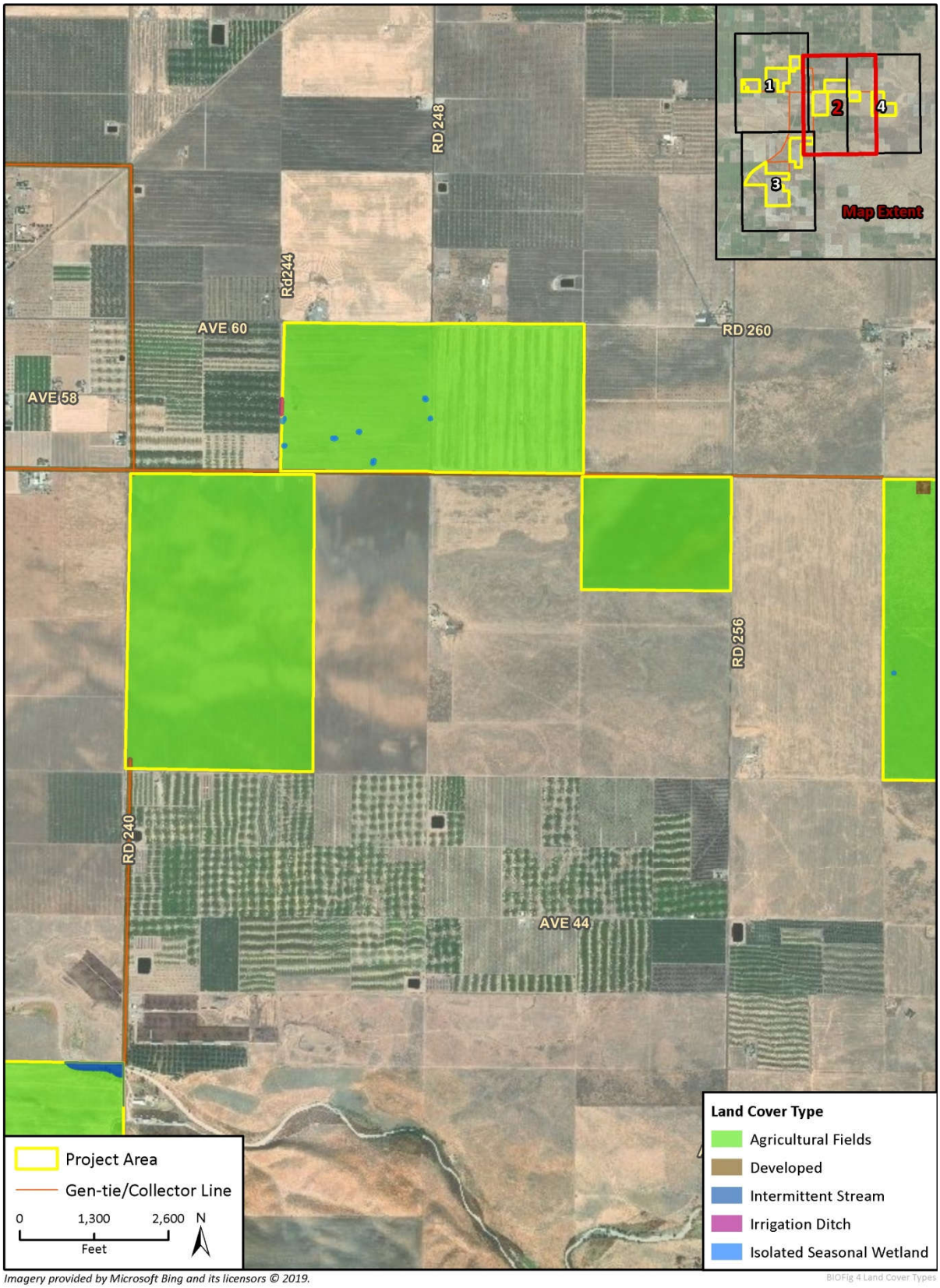
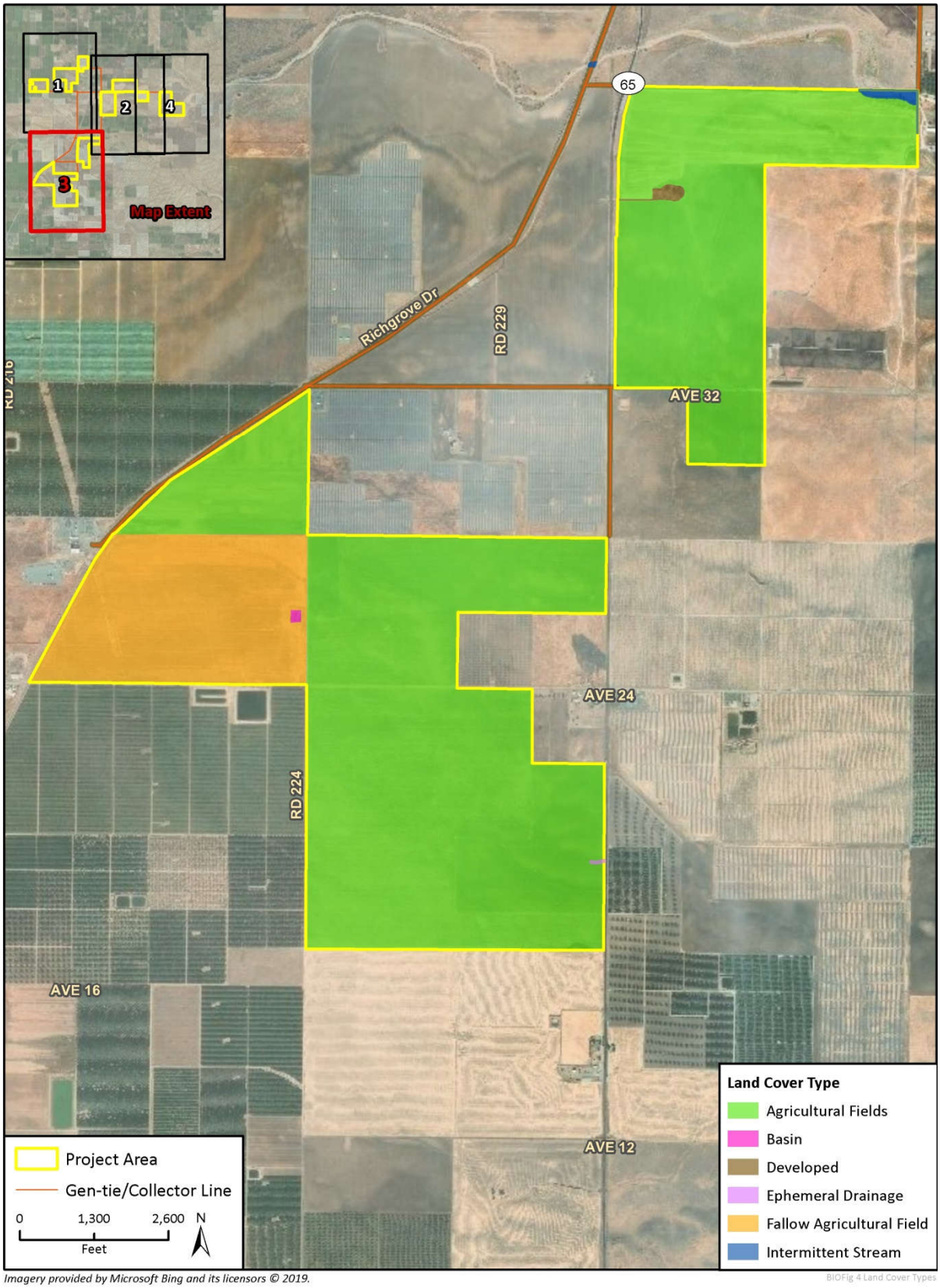


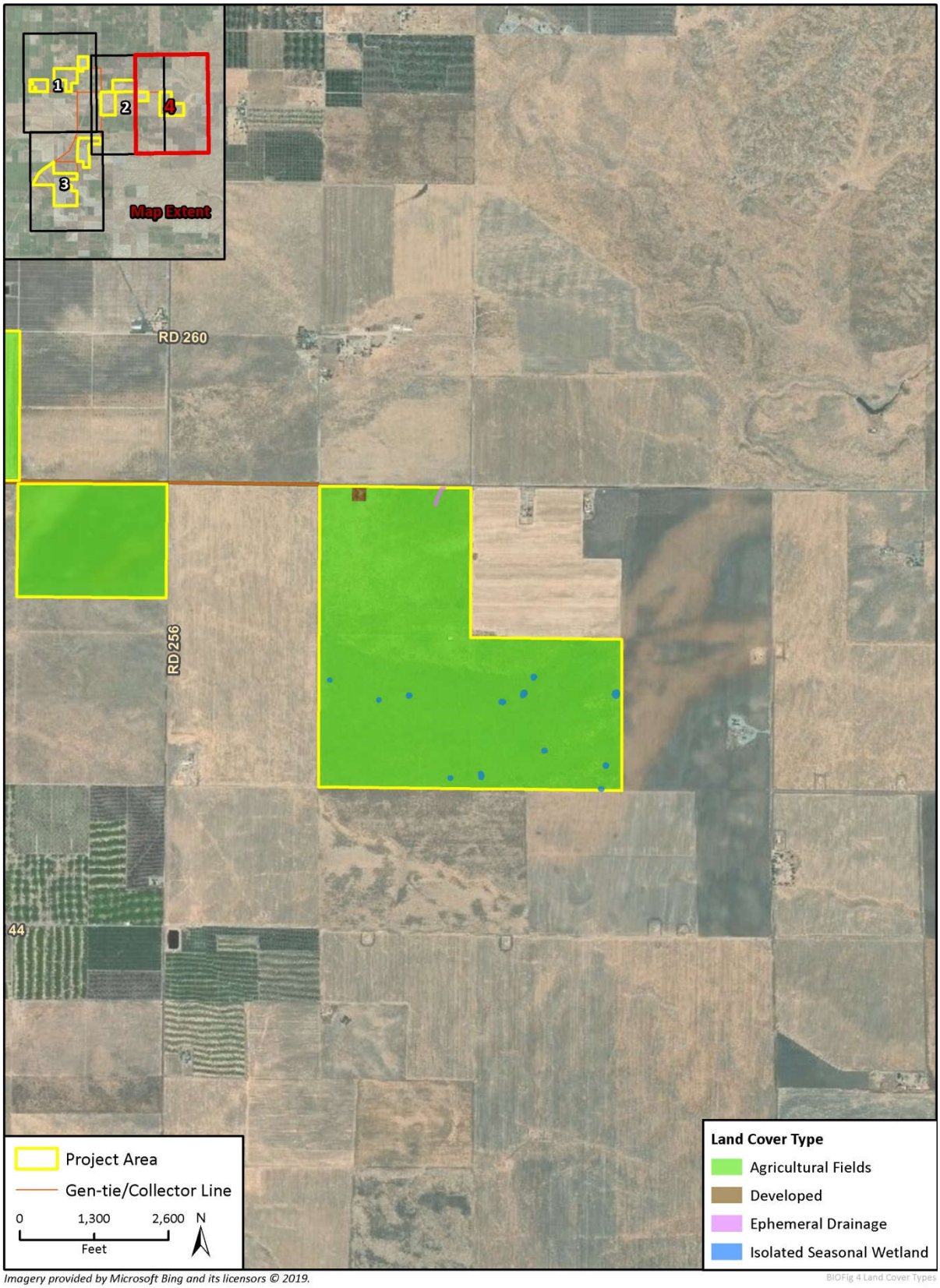
Figure 4c Land Cover Map



Imagery provided by Microsoft Bing and its licensors © 2019.

BIOFig 4 Land Cover Types

Figure 4d Land Cover Map



Agricultural Fields (Grain/Ruderal)

Active agricultural fields comprise more than 93% (3,367 acres) of the Project Area. This habitat is dominated by non-native grasses including winter wheat, wild oats (*Avena* sp.), barley (*Hordeum* sp.), and bromes (*Bromus* sp.). Russian thistle (*Salsola tragus* and *S. australis*) and vinegar weed (*Trichostema lanceolatum*) were commonly observed in this habitat, occurring as codominant species in some areas prior to annual plowing. Only one parcel contains actively irrigated citrus groves, making approximately 50 acres in the northeast of the Project Area (in the same parcel containing isolated seasonal wetlands, Figure 4b). The agricultural fields on-site meet the definition of Dryland Grain Crops or Evergreen Orchard, in the case of the citrus grove, described in the California Wildlife Habitat Relationships System (CWHRS, CDFW 2019d). While these grain/ruderal fields have been regularly subject to agricultural disturbance, the presence of large Russian thistle patches over much of the area in October suggests that the ground had not been disturbed during the past year. Several of the vegetated fields have been grazed by sheep, and as of October 2019, about half of the Project Area had been recently plowed or disked, falling under the CWHRS definition of barren land cover. Cattle pasture is also included in this habitat type, as are are numerous dirt roads constructed for agricultural practices or for access to utility transmission corridors.

Developed

The Project Area contains approximately 175 acres of developed lands. This land cover type is not naturally occurring and is not described in either the Holland (1986) or Sawyer et al. (2009) classification systems. This community consists of areas that have been modified such that most or all vegetation has been removed or only small areas of landscaped vegetation are present. Roads and structures are included within this land cover type. In some cases, vegetation from adjacent areas may overhang and ornamental trees are present (*Eucalyptus* sp., etc.).

Intermittent Stream

The White River crosses a portion the Project Area at its center, immediately west of Road 240 and at a gen-tie/collector line corridor west of the same parcel, along Richgrove Road (Figure 4c). Vegetation is sparse in the vicinity of the White River within the Project parcel, and cattle and sheep have been grazed near the riverbed. The riverbed itself is mostly sand with sparse vegetation along its banks. Vegetation along the banks and adjacent to the drainage include blue elderberry (*Sambucus nigra* ssp. *caerulea*), red willows (*Salix laevigata*.), and tree tobacco (*Nicotiana glauca*) along with a mix of ruderal grasses and forbs (Appendix B, Photograph 9). At the gen-tie/collector line corridor crossing, vegetation consists mainly of ruderal grasses and forbs, although three elderberry shrubs are present. This intermittent stream is further discussed in Section 4.3.

Ephemeral Drainage

Two ephemeral drainages occur within the Project Area. One conveys water from a roadside drainage ditch on Avenue 56 south into the eastern-most parcel (Figure 4d). The other ephemeral drainage was observed east of a corrugated pipe culvert under State Route 65 at the southern end of the Project Area (Figure 4c). This drainage is sparsely vegetated and located within an active agricultural field. This land cover type does not correspond well with either the Holland (1986) or Sawyer et al. (2009) classification systems. This ephemeral drainage is further discussed in Section 4.3.

Isolated Seasonal Wetland

Nineteen isolated seasonal wetlands are present within the Project Area, seven in the parcel north of Avenue 56 and east of Road 244, and twelve in the eastern-most parcel south of Avenue 56 (Figure 4b,4d). The seven landscape depressions in the more western parcel are vegetated with facultative wetland and upland species, including rabbit's foot grass (*Polypogon monspeliensis*), knotweed (*Polygonum aviculare ssp. depressum*) and toadrush (*Juncus bufonius*). Surrounding the depressions were oats (*Avena* sp.), prickly lettuce (*Lactuca serriola*), horseweed (*Erigeron* sp.), and Russian thistle. This vegetation stood out in contrast to the surrounding agricultural landscape in the parcel, which had been planted with a hay crop and harvested within the past year. The twelve wetland depressions in the eastern-most parcel were mostly devoid of vegetation, and little difference was observed between the vegetation in surrounding upland areas and that surrounding the wetlands, likely due to intensive cattle grazing in that parcel. More information on this land cover type is provided in Section 4.3.

Basin

One remnant irrigation basin is present within the Project Area (Figure 4c). The basin is vegetated with non-native species similar to the grain/ruderal habitat, including winter wheat, rabbitsfoot grass, oats, prickly lettuce, horseweed, and Russian thistle. While water is no longer present in this basin, the differences in vegetation and the softer, less compacted soil make it more suitable habitat for wildlife than surrounding fallow agricultural lands. Small burrows and coyote sign were observed within and in the vicinity of this basin. Burrows observed were not suitable for burrowing owls or San Joaquin kit fox.

Irrigation Ditch

An irrigation ditch was observed in the same parcel as the isolated seasonal wetlands, next to Road 244, north of Avenue 56 (Figure 4b). This ditch connects to an isolated seasonal wetland. The ditch was adjacent to an irrigation valve and located south of the active citrus grove on the parcel. Vegetation in the ditch was mostly absent, with obvious soil cracking and moist soils indicating recent presence of water. Vegetation surrounding the ditch is similar to the vegetation surrounding isolated seasonal wetlands within the same parcel.

3.3 General Wildlife

The Project Area and the surrounding vicinity consists predominantly of-disturbed agricultural lands. Due to the disturbed nature of the site, wildlife diversity is expected to be low, and field surveys confirmed relatively low species diversity and abundance in the Project Area. Numerous bird species typically found in open grassland and agricultural habitats were observed during surveys, including: red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus hudsonius*), American kestrel (*Falco sparverius*), common raven (*Corvus corax*), western meadowlark (*Sturnella neglecta*), killdeer (*Charadrius vociferus*), and prairie falcon (*Falco mexicanus*). Bird species more commonly associated with residential developments were also detected including common crow (*Corvus brachyrhynchos*), rock dove (*Columba livia*), and mourning dove (*Zenaida macroura*). Mammals detected include California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), and several domestic dogs. A full compendium of all wildlife species observed within the Project Area is presented in Appendix C.

4 Sensitive Biological Resources

Local, state, and federal agencies regulate special status species and other sensitive biological resources and require an assessment of their presence or potential presence to be conducted on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed within the Project Area and evaluates the potential for the Project Area to support additional sensitive biological resources. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the survey area, previous reports for the Project Area, and the results of reconnaissance-level site visit. The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site. Protocol surveys (if conducted) did not detect species.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS or National Marine Fisheries Service (NMFS) under the ESA; those listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the CESA or Native Plant Protection Act; those recognized as Fully Protected or Species of Special Concern (SSC) by the CDFW; raptors and nesting birds as protected by the CFGC; and plants ranked as California Rare Plant Rank (CRPR) 1 and 2, per the following definitions:

- **Rank 1A** = Plants presumed extinct in California
- **Rank 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- **Rank 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened)

- **Rank 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known)
- **Rank 2** = Rare, threatened or endangered in California, but more common elsewhere

CRPR 1B and 2 plant species are typically regarded as rare, threatened, or endangered under the CEQA by lead CEQA agencies and were considered as such in this document. CRPR 3 and 4 plant species are typically not considered for analysis under CEQA except where they are designated as rare or otherwise protected by local governments or where cumulative impacts could result in population–level effects.

CDFW previously tracked sensitive natural communities and kept records of their occurrences in the CNDDB. However, while CDFW works to transition fully to a vegetation alliance-based system consistent with national standards, the Sensitive Natural Communities List in the CNDDB has not been maintained and no new information has been added in recent years. Therefore, vegetation types on site were also compared with the List of Vegetation Alliances and Associations (CDFW 2019e). According to the CDFW Vegetation Program, Alliances with State ranks of S1-S3, and certain other associations, are considered to be imperiled, and thus, potentially of special concern. Plant communities are also considered special status biological resources if they have limited distributions, have high value for sensitive wildlife, contain special status species, or are particularly susceptible to disturbance.

4.1 Special Status Species

Based on the results of the database queries, literature review and reconnaissance survey, 20 special-status plant species, 24 special status wildlife species, and two special-status plant communities required evaluation for potential to occur in the Project Area. Special-status plant and wildlife species recorded in the CNDDB, by the CNPS Online Inventory of Rare and Endangered Plants of California (within the *Ducor, California* and *Richgrove, California* USGS 7.5-minute quadrangles and the ten surrounding quadrangles), in USFWS IPaC are listed in Appendix D. A list of animals and plants observed during surveys can be found in Appendix C.

4.1.1 Special Status Plant Species

Twenty (20) special-status plant species were evaluated for their potential to occur on the project area, including five (5) species known to occur within five miles of the Project Area. Of the 20 species evaluated, only one has potential to occur on site based on the presence of potentially suitable habitat: San Joaquin adobe sunburst (*Pseudobahia peirsonii*). The remaining 19 species were excluded based on the absence of habitat, lack of suitable soils, and historical disturbance experienced in the Project Area (see Appendix D for a species by species evaluation).

San Joaquin Adobe Sunburst

The San Joaquin adobe sunburst is a federally threatened and state endangered species that occurs in valley or foothill grasslands or cismontane woodlands in the southeastern San Joaquin valley. This annual aster is found in clay soils. Threats include development, overgrazing, and competition from non-native species. There are two historic occurrences within the Project Area, including one at the southwestern edge of the Project Area, in the southernmost parcel along Richgrove Road. The remaining nine CNDDB occurrences within five miles are found east of the site along Avenue 56. While sites with active agriculture are unlikely to have this plant present, recent occurrences in

CNDDB have found it co-occurring with non-native oats (*Avena* sp.) and other plants typical of grasslands in the area. Areas of the Project Area that are left fallow or peripheral areas (road edges, untilled edges of fields) with clay soils have a low potential to provide suitable habitat for this species. The San Joaquin adobe sunburst blooms from February to April and grows 0.7 to 2.3 feet (20-70 cm) tall. No individuals were observed during the reconnaissance survey in October.

4.1.2 Special Status Animal Species

Rincon evaluated 24 special-status wildlife species for their potential to occur within the Project Area, or in adjacent habitats (Appendix D). Four of these species have known occurrences within five miles of the Project Area. Species are considered to have special status based on a State and/or federal listing, because they are considered a California Species of Special Concern (SSC), or are otherwise protected by CDFW. Four species listed as threatened or endangered by state or federal regulations and two SSC have a potential to occur on the Project Area and four other state-protected species were observed during surveys of the Project Area:

Common Name	Scientific Name	Status	Potential to Occur
San Joaquin kit fox	*Vulpes macrotis mutica*	FE, ST	Low Potential
Swainson's hawk	*Buteo swansoi*	ST	Low Potential
Vernal pool fairy shrimp	*Brancinecta lynchi*	FT	Low Potential
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	Low Potential
Burrowing owl	*Athene cunicularia*	SSC	Low Potential
Western spadefoot	*Spea hammondii*	SSC	Low Potential
Cooper's hawk	*Accipiter cooperii*	WL	Present
Northern harrier	*Circus hudsonius*	SSC	Present
White-tailed kite	*Elanus leucurus*	FP	Present
Prairie falcon	*Falco mexicanus*	WL	Present

FE = Federally Endangered | FT = Federally Threatened | SE = State Endangered | ST = State Threatened
SSC = CDFW Species of Special Concern | FP = State Fully Protected | WL = State Watch List

The remaining 14 species are not expected to occur in the Project Area or immediate vicinity based on the absence of suitable habitat and/or because the species' range does not overlap the Project Area. Those special status wildlife species that have potential to occur are discussed further below.

San Joaquin Kit Fox

The San Joaquin kit fox (SJKF) is a federally endangered and state threatened species that is endemic to California west of the Sierra Nevada Mountains. It occurs in the Central Valley generally from the Sacramento area south to the southern end of the San Joaquin Valley, in the Carrizo Plain, the Panoche Valley, and from northern San Luis Obispo County north through the Salinas Valley. This species is about the size of a house cat, weighing 4-7 pounds and is approximately 30 inches in length. Its diet consists of black-tailed jackrabbits and desert cottontails, rodents (especially kangaroo rats [*Dipodomys* sp.] and ground squirrels [*Spermophilus* sp.]), insects, reptiles, and some birds, bird eggs, and vegetation. SJKF are most commonly found in gently sloping to relatively flat terrain vegetated with grasslands and open scrub. They may occur on a limited basis in areas under

less intense agricultural production, such as dry-land grain farming and orchards, and they are known to occur in urban areas.

No sign of SJKF (track, feces, or dens) was observed in the Project Area. All 19 reported occurrences within five miles of the site were documented in the 1970s, and the intensive agricultural development in the area has likely reduced kit fox activity in the area. Although California ground squirrels were observed in the Project Area during surveys, their burrows were few, and small mammal diversity and abundance the Project Area is low based on observations during the reconnaissance surveys, including presence of a rodent bait station in the northeast of the Project Area. The Project Area is unlikely to contain resident SJKF, however there is a low potential the species could occur while foraging or during dispersal through the Project Area.

Burrowing Owl

Burrowing owl is a CDFW SSC that occupies open, treeless areas within grassland, low density scrub, and desert biomes. This species generally inhabits gently-sloping areas, characterized by low, sparse vegetation, and is often associated with high densities of burrowing mammals (Poulin et al. 2011). Burrowing owl often uses relatively disturbed areas such as agricultural fields, golf courses, cemeteries, and vacant urban lots in addition to natural breeding habitats. Nests are most often in fossorial animal burrows, such as California ground squirrel or American badger, but atypical nests such as culverts or rubble piles may also be used. Nest sites are typically selected in an area with a high density of burrows.

There is one known burrowing owl occurrence within five miles of the Project Area. Active agricultural fields do not provide suitable habitat for the species; however, open areas and berms along fence-lines and the margins of agricultural fields where ground squirrel burrows are present provide suitable, although generally marginal breeding habitat. An intensive survey of these portions of the project site was conducted during the reconnaissance surveys, and no burrowing owls or their sign were observed. However, there is a low potential for burrowing owl to forage or nest within suitable habitat in the Project Area and within 500 feet of the Project Area.

Swainson's Hawk

The historical breeding range of Swainson's hawk in California included the Great Basin, Sacramento and San Joaquin Basins, the coast from Marin County to San Diego County, and scattered sites in the Mojave and Colorado Deserts (England et al. 1997). The species continues to breed across its entire historical range, but in significantly lower numbers than historically. In the Central Valley, much of the native habitat has been converted to agricultural and urban uses, thereby limiting nesting and foraging opportunities for Swainson's hawk. This species is often found nesting in trees associated with scattered rural residences, particularly in relation to grasslands or dry-land grain fields. Throughout its range the species nest almost exclusively in trees, typically on the edges of woodland adjacent to grass or shrubland habitat (England et al. 1997).

The CNDDB does not contain any records of Swainson's hawks nesting within 10 miles of the Project Area, and no Swainson's hawks or raptor nests were observed during surveys. Very few trees are present within the Project Area or in the immediate vicinity. Suitable nesting habitat within 1 mile of the Project Area is limited to isolated trees or tree rows outside of the Project Area on highway 65 on the north and south ends of the Project Area, Road 256 on the east side of the Project Area, and along the White River east of the Project Area. There is a low potential for the species to nest outside of, but within 1 mile of the Project Area.

Other Raptors

Cooper's hawk, northern harrier, white-tailed kite, and prairie falcon were detected in the Project Area during surveys. Cooper's hawk and prairie falcon are state watch list species. Northern harrier is a CDFW SSC, and white-tailed kite is a state fully protected species. None of these species had recorded CNDDB occurrences within 10 miles of the Project Area. Although hunting styles differ among these species, they pursue similar prey: small birds and mammals and sometimes reptiles, amphibians, or insects. While suitable foraging habitat is present, it is unlikely that any of these species will nest within the Project Area. Vegetation on the ground is not dense enough for northern harrier nesting habitat. Cliffs and bluffs suitable for prairie falcon nests are not present in the Project Area. The sparse trees within the Project Area provide only marginally suitable nesting habitat for white-tailed kites and Cooper's hawks, as denser stands of trees are preferred. Cooper's hawks generally occur in wooded areas and the individual observed in the Project Area was likely migrating or foraging farther from its preferred habitat.

Western Spadefoot

Western spadefoot is a CDFW SSC found in sandy washes and flood plains of the Central Valley and the central and southern Coast ranges of California (Stebbins 2003). This species gets its name from a hardened patch on its rear feet used for digging. Western spadefoot are nocturnal and have vertical pupils for night vison. They are terrestrial, taking refuge underground during the day, and only entering the water to breed. Breeding occurs in vernal pools or ponds with slow or stagnant water. Two occurrences have been recorded within five miles of the Project Area (CDFW 2019a). The Project Area contains suitable habitat in sandy soils and small mammal burrows. This species has a low potential to occur in burrows near water sources within the Project Area, such as the White River, or near irrigation ponds that occur adjacent to the Project Area.

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp is a federally threatened species with a low potential to occur on-site. This species is endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains in ephemeral pools. This species inhabits small, clear-water sandstone depression pools and grassed swales, earth slumps, or basalt-flow depression pools. Vernal pool fairy shrimp typically hatches when the first rains of the year fill the pools. They mature in about 41 days under typical winter conditions. Towards the end of the season, females produce cysts that become embedded in the dried mud bottom in the summer. The literature review identified four occurrences of vernal pool fairy shrimp within five miles of the Project Area. Potentially suitable habitat for this species was identified within isolated seasonal wetlands in the parcel west of Road 244 and north of Avenue 56 (Figure 4b).

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle is a federally threatened species found in riparian habitat in the vicinity of their host plant, the elderberry (*Sambucas* sp.). Adult beetles are active from March through June, when they lay their eggs on their host plant (USFWS 2017). After hatching, larvae bore into the elderberry bark and go through a two-year life cycle in the pith before metamorphosing through the pupal stage into their final adult stage. While the southern edge of their range is thought to be limited to Fresno county (USFWS 2017), an occurrence has been recorded within 10 miles of the Project Area (CDFW 2019a). Rincon mapped four (4) blue elderberry

plants within the upland vegetation near the White River. There is a low potential for this species to occur within that portion of the Project Area.

4.1.3 Other Protected Species

Nesting Birds

Non-game migratory birds protected under the California Fish and Game Code (CFGC) Section 3503, such as native avian species common to grasslands, agricultural, developed and ruderal areas, have the potential to breed and forage throughout the Project Area. Species of birds common to the area that typically occur in the region, such as red-tailed hawk, American kestrel, American crow, and Brewer's blackbird (*Euphagus cyanocephalus*), may nest in the Project Area. Nesting by a variety of common birds protected by CFGC Section 3503 could occur in virtually any location throughout the Project Area containing native or non-native vegetation.

4.2 Sensitive Plant Communities and Critical Habitats

No critical habitats occurred within the Project Area (USFWS 2019). Two sensitive natural communities were found in the CNDDB search of the 12 USGS quadrangles: Northern Claypan Vernal Pool and Sycamore Alluvial Woodland (CDFW 2019a). Neither of these communities nor other sensitive plant communities are found within the Project Area.

4.3 Jurisdictional Waters and Wetlands

The United States Army Corp of Engineers (USACE) is expected to assert jurisdiction under Section 404 of the Clean Water Act (CWA) over stream, lake, and wetland features to the "ordinary high water mark" (OHWM), and to the edge of those wetlands with all three criteria that define federal wetlands: hydric soils, hydrophytic vegetation, and wetland hydrology. The Regional Water Quality Control Board (RWQCB) also has jurisdiction over waters of the U.S. under Section 401 of the CWA. The RWQCB may also assert jurisdiction over waters of the State under the Porter-Cologne Water Quality Control Act.

Neither the White River nor ephemeral drainage are considered navigable waters, so are not subject to USACE jurisdiction. While the isolated wetlands fit USACE wetland criteria, they are located outside of a 100-year floodplain and greater than 4000 feet from any waters of the United States, therefore they are not subject to USACE jurisdiction (Rincon 2020).

The White River, ephemeral drainages, irrigation ditch, and isolated wetlands are considered waters of the state under RWQCB jurisdiction under the Porter Cologne Water Quality Control Act. Any impacts to these drainages or wetlands would require a RWQCB discharge permit.

The White River and the two ephemeral drainages show evidence of a bed and a bank, and may be subject to CDFW jurisdiction under CFGC. No riparian habitat was present. Impacts to these areas may require a Lake or Streambed Alteration Agreement with CDFW.

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal

populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network. The California Essential Habitat Connectivity Project commissioned by the California Department of Transportation (Caltrans) and CDFW; identifies "Natural Landscape Blocks" which support native biodiversity and the "Essential Connectivity Areas" which link them (Spencer et al. 2010).

Wildlife movement corridors can be both large and small in scale. Fallow agricultural fields, fence-lines, culverts, and dry riverbeds, such as the White River, provide local scale opportunities for wildlife movement throughout the Project Area. Existing roads within the Project Area also act as corridors for wildlife movement, particularly for relatively disturbance-tolerant species such as red fox, coyote, and raccoon. Natural Landscape Blocks are mapped within the Project Area in a small section of the parcel west of Road 240, just south of the White River. No Essential Connectivity Areas are mapped within the Project Area.

4.5 Resources Protected By Local Policies and Ordinances

The Project is located in unincorporated Tulare County. There are no applicable Habitat Conservation Plans that cover the proposed Project activities in this area of Tulare County. The County of Tulare General Plan (2012) has Environmental Resources Management Elements that may be applicable to this Project (listed in Appendix A).

4.6 Habitat Conservation Plans

The Project is not within any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5 Impact Analysis and Mitigation Measures

This section discusses the potential impacts and effects to biological resources that may occur from implementation of the proposed project and recommends mitigation measures that would reduce those impacts where applicable.

5.1 Special-Status Species

The proposed project would have a significant effect on biological resources if it would:

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.

5.1.1 Special Status Plants

One special status plant species has the potential to occur within the Project Area based on known ranges, habitat preferences, species occurrence records in the vicinity of the Project Area, and presence of suitable habitat.

San Joaquin Adobe Sunburst

The San Joaquin adobe sunburst has a low potential to occur in the Project Area in fields that are left fallow or peripheral areas with clay soils. Parcels within the Project Area where this species is likely to occur include the fallow agricultural field vegetation community at the southwest of the Project Area and in the upland vegetation surrounding isolated seasonal wetlands in the parcel toward the northeast of the Project Area. This plant is also likely to occur along fence-lines and road edges where vegetation is not plowed throughout the Project Area. If present, direct impacts to the San Joaquin adobe sunburst such as loss of plants or their habitat would occur due to Project activities such as grubbing and grading. Indirect impacts would include changes in soil profile, fugitive dust, and accidental human intrusion into sensitive areas. These impacts would be considered significant, and the following mitigation measure is recommended to reduce potential impacts to less than significant.

BIO-1 Mitigation Measures for San Joaquin Adobe Sunburst

A survey for San Joaquin adobe sunburst within fallow agricultural fields and vegetation surrounding isolated wetlands within the Project Area will be conducted by a qualified botanist during its blooming period (February- April) following CDFW and USFWS special-status plant survey guidelines to determine if populations are present. If detected, San Joaquin adobe sunburst locations within the Project Area would be flagged, and a 150-foot avoidance buffer established. If avoidance is not feasible, the applicant shall provide evidence to the County that a Section 2081 Incidental Take Permit (ITP) from CDFW)and Section 7 or 10 Take Permit from USFWS for adobe sunburst (if determined to be required) has been obtained. If it is determined that an ITP is not required from either agency, the project developer/operator shall provide a letter describing the consultation

process and wildlife agency determination, indicating that an ITP is not required. The letter shall also identify the USFWS and CDFW point of contact and contact information.

5.1.2 Special Status Wildlife

Ten special status wildlife species have potential to occur within the Project Area based upon known ranges, habitat preferences, species occurrence records in the vicinity of the Project Area, and presence of suitable habitat. All of these species have some potential to occur within the Project Area. Four of these species were observed in the Project Area during site surveys: Cooper's hawk, prairie falcon, northern harrier, and white-tailed kite. Nesting special status bird species and/or nesting birds protected under CFGC may occur throughout the Project Area.

San Joaquin Kit Fox

The SJKF has a low potential to occur on-site. No evidence of SJKF or burrows of sufficient size to accommodate kit foxes were detected during site surveys. Foxes may use dry-land agriculture, fallow agricultural fields, and adjacent grasslands for foraging; however, the low abundance of prey makes the site marginal as foraging habitat. The species may occur within the Project Area irregularly during dispersal. Direct impacts to SJKF, if present during construction, could include injury or mortality of individuals. Injury or mortality of even a single individual would be considered significant under CEQA. Mitigation Measures BIO-2 and BIO-3 are recommended to reduce direct impacts to a less than significant level.

BIO-2 Mitigation Measures for San Joaquin Kit Fox

A preconstruction clearance survey for San Joaquin kit fox shall be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas shall include the entire Project area and all accessible undeveloped habitat within 200 feet. If potential dens are not located, construction shall proceed. If a potential den is located, an infrared camera trap shall be placed at the den entrance for three days to confirm species occupancy/absence. If San Joaquin kit fox use is observed, the den shall be avoided and the USFWS shall be contacted. Construction activities shall adhere to the avoidance and minimization measures outlined in the USFSWS 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance, outlined below:

- Project-related vehicles shall observe a 20-mph speed limit in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction should be minimized. Off-road traffic outside of designated project areas shall be prohibited.
- To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS shall be notified within three days of the discovery.
- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction or project site.
- No firearms or pets shall be allowed on the project site.

- Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.

BIO-3 Worker Environmental Awareness Program

An employee education program shall be conducted for the project that has expected impacts to all special-status species with the potential to occur on-site. The program shall consist of a brief presentation by persons knowledgeable in the species and legislative protection to explain endangered species concerns to contractors and their employees involved in the project. The program shall include the following: a description of each species and its habitat needs; a report of the occurrence of the listed species in the project area; an explanation of the status of the species and its legal protections; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project site.

Burrowing Owl

No burrowing owls or signs of burrowing owl use of small mammal burrows were detected during reconnaissance surveys of the Project Area. Isolated and low-density California ground squirrel colonies in the Project Area and associated ditches and roadside berms provide suitable, but currently unoccupied nesting habitat, predominantly at the margins of agricultural fields. Burrowing owls may utilize the Project Area for foraging; however, ongoing agricultural uses and low abundance of prey make most of the Project Area poor quality foraging habitat. The species is most likely to occur as a transient. The presence of small numbers of California ground squirrel burrows in isolated locations on and adjacent to the site present a low potential for burrowing owls to establish a nest on-site in the future. If this were to occur, the Project could directly impact the nest either through ground disturbance activities destroying the nest, or through disruption of normal biological behaviors during construction of the Project resulting in nest failure. Such an impact would be considered significant under CEQA. Mitigation Measure BIO-4 is recommended to reduce impacts to less than significant.

BIO-4 Mitigation Measures for Burrowing Owl

A preconstruction clearance survey for burrowing owls shall be conducted by a qualified biologist no less than 14 days prior to the start of construction activities in accordance with the protocols adopted by the CDFW *Staff Report on Burrowing Owl Mitigation* (2012). If burrowing owls are observed on-site or within 500 feet of the site, the following avoidance and minimization measures shall be implemented:

- A no-disturbance buffer should be established around occupied burrows. The buffer size may range from 150 feet to 650 feet depending on the time of year and the level of construction activity (refer to CDFW 2012).
- A qualified biologist should monitor the nest to ensure construction activities will not adversely impact the nesting birds and determine when the burrow is no longer occupied.

- If construction activities cannot avoid the active burrowing owl nest, CDFW should be consulted regarding passive eviction and mitigation. If necessary, burrowing owls may be passively relocated from burrows after an exclusion plan is prepared and approved by the CDFW.

Raptors and Nesting Birds

Special status raptors seen within the Project Area, such as the Cooper's hawk, northern harrier, prairie falcon, and white-tailed kite, as well as other native birds such as killdeer, mourning dove, and western meadowlark observed during the site survey may nest on site. A small number of suitable nesting trees for Swainson's hawk and other birds and raptors are present within the Project Area in landscaped vegetation of developed areas (Figure 4a-b), in the two willow trees present at the White River and in other landscaped trees within 0.5 mile of the Project Area. Construction activity initiated within 0.5-mile of an active Swainson's hawk nest could significantly disturb the species thereby resulting in nest abandonment. The potential risk of nest abandonment is low for Project activities that occur greater than 200 yards from a nest (CDFG 2000). Swainson's hawks may also forage within the Project Area; however, the Project Area represents only marginal foraging habitat. Based on the large area of available Swainson's hawk foraging habitat in the region similar to the land cover types within the Project Area, loss of foraging habitat from the development of the Project Area would not be considered a significant impact. Impacts that result in incidental take of nesting Swainson's hawks within 0.5 mile of the Project would be considered significant. For other bird species, if nests are present in the Project Area during construction, the Project could directly impact the nest either though ground disturbance activities destroying the nest, or through disruption of normal biological behaviors during construction of the Project resulting in nest failure. Direct impacts to non-listed species would not be significant under CEQA, but would be a violation of CFGC. The following mitigation measure is recommended to reduce potential impacts to nesting raptors to less than significant, and to avoid violations of the CFGC.

BIO-5 Mitigation Measures for Raptors, and Nesting Birds

Construction activity commencing outside of the nesting season does not require any mitigation. To minimize impacts to nesting birds, including Swainson's hawk and other local raptors protected by Sections 3503, 3503.5, and 3513 of the CFGC during the bird breeding season (February 1 through August 30; March 1 through September 31 for Swainson's hawk; but variable based on seasonal and annual climatic conditions), and if construction activities are scheduled to commence during the breeding season, the following mitigation and avoidance measures will be implemented:

- A preconstruction nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and vegetation removal. The survey shall be conducted within the Project Area and include a 150-foot buffer for passerines, 500-foot buffer for other raptors, and 0.5-mile buffer for active Swainson's hawk nests. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the region.
- If nests are found, an appropriate avoidance buffer will be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. For Swainson's hawk nests, an avoidance buffer of up to ½ mile shall be established by a qualified biologist based on the nest location in relation to the project activity, the line-of-sight from the nest to the project activity, and observed hawk behavior at the nest.
- All construction personnel shall be notified as to the existence of the buffer zones and to avoid entering buffer zones during the nesting season. No ground disturbing activities shall occur within the buffer until the avian biologist has confirmed that breeding/nesting is completed and

the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

Western Spadefoot

Impacts to western spadefoot may occur if individuals are present during construction. Indirect impacts may occur due to disturbance and loss of habitat, and direct impacts may occur as a result of mortality during clearing and grubbing or active construction. Impacts to non-listed species such as western spadefoot (SSC) would be considered significant under CEQA if it would threaten the continued existence of the population. Due to the disturbance of habitat from agricultural activities in the area and the prevalence of dryland farming, the only parcels on which the spadefoot has a low potential to occur are those with non-native grasses in the vicinity of isolated seasonal wetlands and ground squirrel burrows, and in proximity of the White River. It is unlikely that the continued existence of the population would be threatened due to the small area of marginally suitable habitat within the Project Area and the presence of similar habitat in surrounding areas outside of the Project that likely support larger populations of this species. Impacts to western spadefoot from project activities are not expected.

Vernal Pool Fairy Shrimp

The White River, ephemeral drainage and isolated wetlands within the Project Area provide approximately 0.27 acres of potentially suitable habitat for the federally threatened vernal pool fairy shrimp. The Project will be designed to minimize direct impacts to areas that provide suitable habitat for vernal pool fairy shrimp. Indirect impacts may occur through water quality degradation, localized erosion, or human intrusion; however, Project design features requiring the preparation and implementation of appropriate stormwater pollution prevention plan measures (e.g. silt fence) and implementation of Mitigation Measure BIO-6 would ensure no indirect impacts would occur to vernal pool fairy shrimp.

BIO-6 Mitigation Measures for Vernal Pool Fairy Shrimp

To avoid impacts to vernal pool fairy shrimp, the project will be designed and constructed to avoid vernal pool fairy shrimp (VPFS) habitat by 250 feet. All Project work, including rough grading, clearing and grubbing, installation of solar arrays and associated facilities, construction staging, and site access, will occur at least 250 feet from potential vernal pool fairy shrimp habitat. If vernal pool fairy shrimp habitat cannot be avoided, the applicant shall provide evidence to the County that a Section 2081 Incidental Take Permit (ITP) from California Department of Fish and Wildlife (CDFW) for vernal pool fairy shrimp (if determined to be required) has been obtained. If it is determined that an ITP is not required, the project developer/operator shall provide a letter describing the consultation process and wildlife agency determination, indicating that an ITP is not required. The letter shall also identify the CDFW point of contact and contact information.

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle (VELB) is a federally threatened species found in riparian habitat in the vicinity of their host plant, the elderberry (*Sambucas* sp.). Four elderberry plants were observed during the reconnaissance-level site visit at the two locations where the White River crosses through the Project Area therefore, there is a low potential for VELB to occur within the Project Area. Mitigation Measure BIO-7 is recommended to reduce impacts to less than significant.

BIO-7 Mitigation Measures for Valley Elderberry Longhorn Beetle

BIO-7: To avoid impacts to VELB, the project will be designed to avoid impacts to all mapped elderberry shrub. Prior to construction, a qualified biologist will identify and flag all individual elderberry shrubs within the Project Area during a pre-construction survey. Temporary plastic mesh–type construction fence will be installed at least 20 feet from the driplines of elderberry shrubs adjacent to the Project Area to prevent encroachment by construction vehicles and personnel. If VELB habitat cannot be avoided, the applicant shall provide evidence to the County that a Section 2081 Incidental Take Permit (ITP) from California Department of Fish and Wildlife (CDFW) for VELB (if determined to be required) has been obtained. If it is determined that an ITP is not required, the project developer/operator shall provide a letter describing the consultation process and wildlife agency determination, indicating that an ITP is not required. The letter shall also identify the CDFW point of contact and contact information.

5.2 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

b) 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.

The White River, the ephemeral drainages, irrigation ditch, and isolated seasonal wetlands are considered waters of the state and fall under the jurisdiction of the RWQCB under the Porter-Cologne Act. The White River and the ephemeral drainages are also under CDFW jurisdiction pursuant to CFGC. Filling and/or direct removal of any jurisdictional wetland features would constitute a direct impact. The proposed solar array will be designed to minimize direct impacts to jurisdictional areas. Indirect impacts from development could occur if runoff were allowed to enter any water features on-site or adjacent to the Project and would be considered a significant impact under CEQA. Compliance with the Construction General Permit will require the development of a stormwater pollution prevention plan (SWPPP) for projects disturbing more than one acre. The SWPPP will include Best Management Practices (BMPs) that address runoff. Mitigation Measure BIO-8 is recommended to reduce impacts to less than significant.

BIO-8 Mitigation Measures for Jurisdictional Waters and Wetlands

Potentially jurisdictional features should be demarcated with fencing and avoided. If these features cannot be avoided, the project developer shall consult with CDFW and the RWQCB. The Project developer shall provide a letter describing the consultation process and obtain necessary permits, as required. Permitting by the RWQCB, and/or CDFW may be required, including potentially compensatory mitigation. Mitigation for fill would be at 1:1 (one acre of mitigation for each acre of impact) at a minimum, additional mitigation may be required under agency permits.

5.3 Sensitive Plant Communities

The proposed project would have a significant effect on biological resources if it would:

c) Have a substantial adverse impact 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 US Fish and Wildlife Service.

No sensitive natural communities, including riparian habitat, are present within the survey area. Therefore, no impacts to sensitive natural communities are expected.

5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.

The Project is located immediately west of an area identified as a Natural Landscape Block, with a portion of the NLB extending into the east side of the one of the Project parcels west of Road 240. The vast majority of the Project, however, is located outside of the mapped Natural Landscape Block and is not located within any Essential Connectivity Areas. Extensive areas of mapped Natural Landscape Block and documented Essential Connectivity Areas occur within the foothills to the east of the Project Area and provide much higher quality north-south wildlife corridor movement opportunities. The Project Area provides limited opportunities for local wildlife movement and given the extent of development and agricultural practices within and surrounding the Project Area, development of the Project is not expected to interfere with established resident or migratory wildlife corridors.

5.5 Local Policies and Ordinances

The proposed Project would have a significant effect on biological resources if it would:

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

The County of Tulare's General Plan includes goals and policies to protect biological resources, including of rare and endangered species (ERM 1.1), sensitive habitat (ERM-1.2), and encouraging planting of native vegetation (ERM-1.7). With the implementation of mitigation measures described above, there would be no conflict with the General Plan. No additional measures are recommended.

5.6 Adopted or Approved Plans

The proposed Project would have a significant effect on biological resources if it would:

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

The Project Area is not included in any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plans. There would be no impact and no measures are recommended.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Setting

Regulatory Setting

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the Project Area include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Central Valley Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; Species of Special Concern; nesting birds);
- Tulare County

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material into wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters (typically a navigable water). The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through avoidance and minimization to the extent practicable, followed by compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters,

within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The RWQCB administers actions under this general order for isolated waters not subject to federal jurisdiction and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is restricted to direct mortality of a listed species and the law does not prohibit indirect harm by way of habitat modification. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated.

The CDFW also enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibits take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided.

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level office to take any bird in violation of the federal Migratory Bird Treaty Act. CDFW administers these requirements.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the

CDFW for use as a management tool to include these species in special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Perennial, intermittent, and ephemeral streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq*. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream or lake.

Local Jurisdiction

Local Laws, Regulations, and Policies Applying to Natural Resource Protection

The Project is located in unincorporated Tulare County. There are no Habitat Conservation Plans that cover the proposed Project activities in this area of Tulare County. The Tulare County General Plan –Environmental Resources Management Element, Section 8.1 Biological Resources, has several policies that may be applicable to this Project (County of Tulare 2012). They include the following:

ERM-1.1: PROTECTION OF RARE AND ENDANGERED SPECIES

The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or federal government, through compatible land use development.

ERM-1.2: DEVELOPMENT IN ENVIRONMENTALLY SENSITIVE AREAS

The County shall limit or modify proposed development within areas that contain sensitive habitat for special-status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.7: PLANTING OF NATIVE VEGETATION

The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and
variety of well-adapted plants are maintained.

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Appendix B

Site Photographs

Photograph 1. Harvested and grazed winter wheat field at center of Project Area, along State Route 65, photograph facing southwest.

Photograph 2. Established citrus grove, west of recently planted citrus trees in the parcel containing isolated seasonal wetlands south of Avenue 60, photograph facing south.

Photograph 3. Fallow agricultural fields seen from the northwest corner of parcels containing this vegetation community, photograph facing south.

Photograph 4. View from the northwest corner of a recently disked parcel at the northwest of the Project, photograph facing southeast.

Photograph 5. View of structures and edge of fenced residential lot containing eucalyptus trees and house at developed northeast corner of a parcel at the north of the Project Area, west of Road 232, photograph facing west.

Photograph 6. View of developed areas (road, barns, landscaped trees, and residential buildings) in parcel at center of Project Area from Route 65, photograph facing northwest.

Photograph 7. Unused irrigation basin at eastern edge of parcel containing fallow agricultural fields along Road 224, facing west.

Photograph 8. Irrigation ditch along Road 244, north of Avenue 56, photograph facing southwest.

Photograph 9. View of White River and sparse vegetation along the banks from Road 240, photograph facing west.

Photograph 10. Ground squirrel burrows along fence-line between the two parcels east of Road 244, south of Avenue 60 and north of Avenue 56, photograph facing south.

Photograph 11. Ground squirrel burrows along western fence-line of Project parcel south of Avenue 56, west of Road 256, photograph facing south.

Photograph 12. Isolated seasonal wetland north of Avenue 56 and east of Road 244, photograph facing east.

Appendix C

Floral and Faunal Compendium

Plant Species Observed within the Study Area on October 8,9,16, and 17, 2019

Scientific Name	Common Name	Status	Native or Introduced
Trees			
Eucalyptus sp.	Eucalyptus	None	Introduced, Cal-IPC limited
Morus alba	white mulberry	None	Introduced
*Olea europaea***	Olive	None	Introduced, Cal-IPC limited
Salix laevigata	red willow	None	Native
Shrubs			
*Ailanthus altissima***	tree of heaven	None	Introduced, Cal-IPC moderate
Atriplex polycarpa	allscale saltbush	None	Native
*Nicotiana glauca***	tree tobacco	None	Introduced, Cal-IPC moderate
Sambucus nigra ssp. caerulea	blue elderberry	None	Native
Herbs			
Amaranthus albus	tumbleweed	None	Introduced
Amaranthus blitoides	prostrate pigweed	None	Native
Asclepias erosa	desert milkweed	None	Native
Centromadia pungens ssp. pungens	Common spikeweed	None	Native
Convolvulus arvensis	field bindweed	None	Introduced
Croton setiger	turkey-mullein	None	Native
Datura wrightii	jimsonweed	None	Native
Erigeron bonariensis	flax-leaved horseweed	None	Introduced
Erigeron canadensis	horseweed	None	Native
Helianthus annuus	hairy-leaved sunflower	None	Native
Heliotropium curassavicum	seaside heliotrope	None	Native
Heterotheca grandiflora	telegraph weed	None	Native
Hirschfeldia incana	shortpod mustard	None	Introduced, Cal-IPC moderate
Juncus bufonius	common toad rush	None	Native
*Lactuca serriola**	prickly lettuce	None	Introduced
Malva neglecta	common mallow	None	Introduced
Malvella leprosa	alkali mallow	None	Native
Rumex crispus.	curly dock	None	Introduced, Cal-IPC limited
Rumex dentatus	toothed dock	None	Introduced
Salsola australis	tumbleweed	None	Introduced
*Salsola tragus***	Russian thistle	None	Introduced, Cal-IPC limited
Stephanomeria exigua	Small wirelettuce	None	Native
Tribulus terrestris	puncture vine	None	Introduced
Trichostema lanceolatum	Vinegarweed	None	Native
Xanthium strumarium	cocklebur	None	Native

Scientific Name	Common Name	Status	Native or Introduced
Grasses			
*Avena barbata***	slender oat	None	Introduced, Cal-IPC moderate
*Avena fatua***	wild oat	None	Introduced, Cal-IPC moderate
Bromus sp.	brome	None	Introduced, Cal-IPC low to high
Crypsis schoenoides	swamp grass	None	Introduced
*Hordeum vulgare**	common barley	None	Introduced
Phalaris sp.	canary grass	None	Introduced, Cal-IPC moderate
*Polypogon monspeliensis***	rabbitsfoot grass	None	Introduced, Cal-IPC limited
Sorghum sp.	sorghum	None	Introduced
Triticum aestivum	wheat	None	Introduced

Cal-IPC – California Invasive Plant Council

Animal Species Observed Within the Study Area on October 8,9,16, and 17, 2019

Scientific Name	Common Name	Status	Native or Introduced
Reptiles			
Sceloporus occidentalis	Western fence lizard	None	Native
Amphibians			
Lithobates catesbeianus	American bullfrog	None	Introduced
Birds			
Accipiter cooperi	Cooper's hawk	WL	Native
Buteo jamaicensis	red-tailed hawk	None	Native
Buteo lineatus	red-shouldered hawk	None	Native
Charadrius vociferus	killdeer	None	Native
Circus hudsonius	northern harrier	SSC	Native
Columba livia	rock dove	None	Introduced
Corvus brachyrhynchos	American crow	None	Native
Corvus corax	common raven	None	Native
Cyanocitta stelleri	Steller's jay	None	Native
Elanus leucurus	white-tailed kite	FP	Native
Euphagus cyanocephalus	Brewer's blackbird	None	Native
Falco mexicanus	prairie falcon	WL	Native
Falco sparverius	American kestrel	None	Native
Passer domesticus	house sparrow	None	Introduced
Sayornis saya	Say's phoebe	None	Native
Spinus tristis	American goldfinch	None	Native
Sturnella neglecta	western meadowlark	None	Native
Zenaida macroura	mourning dove	None	Native
Mammals			
Canis latrans	coyote	None	Native
Otospermophilus beecheyi	California ground squirrel	None	Native

SSC – State Species of Special Concern; WL – State Watch List; FP – State Fully Protected

Appendix D

Special Status Species Potential to Occur Evaluations

Special Status Plant Species in the Regional Vicinity of the Project Area

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Atriplex cordulata var. *cordulata* heartscale	–/– 1B.2	Chenopod scrub, valley and foothill grassland, meadows and seeps. Alkaline flats and scalds in the Central Valley, sandy soils. 3-275 m. annual herb. Blooms Apr-Oct	Not Expected	Grasslands are present, however the Project Area is heavily disturbed by agricultural activities. No occurrences have been reported within 10 miles.
Atriplex cordulata var. *erecticaulis* Earlimart orache	–/– 1B.2	Valley and foothill grassland. 60-115 m. annual herb. Blooms Aug-Sep (Nov)	Not Expected	Grasslands are present, however the Project Area is heavily disturbed by agricultural activities. No occurrences have been reported within 10 miles.
Atriplex coronata var. *vallicola* Lost Hills crownscale	–/– 1B.2	Chenopod scrub, valley and foothill grassland, vernal pools. In powdery, alkaline soils that are vernally moist with *Frankenia*, *Atriplex* spp. and *Distichlis*. 45-885 m. annual herb. Blooms Apr-Sep	Not Expected	Suitable habitat is absent. No occurrences have been reported within 10 miles.
Atriplex depressa brittlescale	–/– 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Usually in alkali scalds or alkaline clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. 1-325 m. annual herb. Blooms Apr-Oct	Not Expected	Grasslands are present, however the Project Area is heavily disturbed by agricultural activities. No occurrences have been reported within 10 miles.
Atriplex minuscula lesser saltscale	–/– 1B.1	Chenopod scrub, playas, valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. 0-225 m. annual herb. Blooms May-Oct	Not Expected	Grasslands and sandy, alkaline soils are present, however the Project Area is comprised entirely of current or former agricultural lands No occurrences have been reported within 10 miles.
Atriplex persistens vernal pool smallscale	–/– 1B.2	Vernal pools. Alkaline vernal pools. 3-115 m. annual herb. Blooms Jun, Aug, Sep, Oct	Not Expected	Vernal pools are not present. No occurrences have been reported within 10 miles.
Atriplex subtilis subtle orache	–/– 1B.2	Valley and foothill grassland. Alkaline soils. 20-100 m. annual herb. Blooms Jun, Aug, Sep (Oct)	Not Expected	Grasslands and alkaline soils are present, however the Project Area has been heavily disturbed by agriculture. One historical occurrence (1975) has been reported within 10 miles (CDFW 2019a).

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Caulanthus californicus California jewelflower	FE/SE 1B.1	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. Sandy soils. 65-1860 m. annual herb. Blooms Feb-May	Not Expected	Grasslands and sandy soils are present, however the Project Area has been heavily disturbed by agriculture. Two historical occurrences (1958, 1978) have been reported within five miles (CDFW 2019a).
Clarkia springvillensis Springville clarkia	FT/SE 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Cutbanks and openings in blue oak woodland. Decomposed granite loam. 240-1220 m. annual herb. Blooms (Mar) Apr-Jul	Not Expected	Elevation is not suitable within the Project Area. No occurrences have been reported within 10 miles.
Delphinium recurvatum recurved larkspur	–/– 1B.2	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. 3-790 m. perennial herb. Blooms Mar-Jun	Not Expected	Grasslands and alkaline soils are present, however the Project Area has been heavily disturbed by agriculture. Two historical occurrences (1952, 1965) have been reported within five miles (CDFW 2019a).
Diplacus pictus calico monkeyflower	–/– 1B.2	Broadleafed upland forest, cismontane woodland. In bare ground around gooseberry bushes or around granite rock outcrops. 180-1280 m. annual herb. Blooms Mar-May	Not Expected	Suitable habitat is absent.
Eriogonum twisselmannii Twisselmann's buckwheat	-/SR 1B.2	Upper montane coniferous forest. Dry, granitic outcrops. 2270-2745 m. perennial herb. Blooms Jun-Sep	Not Expected	Suitable elevation and habitat are absent.
Eryngium spinosepalum spiny-sepaled button-celery	–/– 1B.2	Vernal pools, valley and foothill grassland. Some sites on clay soil of granitic origin; vernal pools, within grassland. 15-1270 m. annual / perennial herb. Blooms Apr-Jun	Not Expected	Vernal pools are absent and grassland is heavily disturbed by agriculture. No occurrences have been reported within 10 miles.
Fritillaria striata striped adobe-lily	–/ST 1B.1	Cismontane woodland, valley and foothill grassland. Heavy clay adobe soils in oak grassland. 135-1460 m. perennial bulbiferous herb. Blooms Feb-Apr	Not Expected	Suitable soil type is absent. No occurrences have been reported within 10 miles.
Leptosiphon serrulatus Madera leptosiphon	–/– 1B.2	Cismontane woodland, lower montane coniferous forest. Dry slopes; often on decomposed granite in woodland. 300-1300 m. annual herb. Blooms Apr-May	Not Expected	Suitable elevation is absent.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Monolopia congdonii San Joaquin woollythreads	FE/– 1B.2	Chenopod scrub, valley and foothill grassland. Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. 55-840 m. annual herb. Blooms Feb-May	Not Expected	Grasslands are disturbed by agriculture. One historic occurrence (1881) has been reported within 10 miles (CNDDB 2019a).
Navarretia nigelliformis ssp. *radians* shining navarretia	–/– 1B.2	Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. 60-975 m. annual herb. Blooms (Mar) Apr-Jul	Not Expected	Grasslands are present, but heavily disturbed by agriculture. No occurrences have been reported within 10 miles.
Oreonana purpurascens purple mountain-parsley	–/– 1B.2	Subalpine coniferous forest, upper montane coniferous forest, broadleafed upland forest. Open, metamorphic ridgetops in red fir forest. 2130-2865 m. perennial herb. Blooms May-Jun	Not Expected	Suitable habitat and elevation is absent.
Pseudobahia peirsonii San Joaquin adobe sunburst	FT/SE 1B.1	Valley and foothill grassland, cismontane woodland. Grassy valley floors and rolling foothills in heavy clay soil. 115-795 m. annual herb. Blooms Feb-Apr	Low Potential	Grasslands and hilly topography are present within the Project Area. Eleven occurrences have been reported within 5 miles, including two occurrences from 2010 and one from 2016, all to the east of the Project Area (CNDDB 2019a). Two historic occurrences overlap with the Project Area (1938, 1965).
Sidalcea keckii Keck's checkerbloom	FE/– 1B.1	Cismontane woodland, valley and foothill grassland. Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. 85-505 m. annual herb. Blooms Apr-May (Jun)	Not Expected	Grasslands are present, but heavily disturbed. No occurrences have been reported within 10 miles.

Regional Vicinity refers to within a 9-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species

SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

CRPR (CNPS California Rare Plant Rank)

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Special Status Animal Species in the Regional Vicinity of the Project Area

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
Bombus crotchii Crotch bumble bee	–/SC	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	Not Expected	Suitable host plants are present within the Project Area however, the ground-disturbing agricultural activity in this area does not provide suitable habitat. No occurrences have been reported for this species within 10 miles.
Branchinecta lynchi vernal pool fairy shrimp	FT/–	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Low Potential	No vernal pools are present in the Project Area, however seasonal isolated wetlands and swales are present. Four occurrences in 2002 were reported within 5 miles, including one within a half mile of the Project Area (CNDDB 2019a).
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT/–	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	Low Potential	Blue elderberry trees are present within or adjacent to the Project Area. The most recent reported occurrence within 10 miles was in 1991 (CNDDB 2019a).
Fish				
Entosphenus hubbsi Kern brook lamprey	–/– SSC	San Joaquin River system and Kern River. Gravel-bottomed areas for spawning and muddy-bottomed areas where ammocoetes can burrow and feed.	Not Expected	Suitable habitat is absent.
Hypomesus transpacificus Delta smelt	FT/SE	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	Not Expected	Suitable habitat is absent.
Amphibians				
Rana draytonii California red-legged frog	FT/– SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Expected	Suitable habitat is absent.
Spea hammondii western spadefoot	–/– SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Low Potential	May be present in grasslands or near seasonal water sources. Two occurrences (2001, 2005) reported within five miles (CNDDB 2019a).

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Reptiles				
Anniella pulchra northern California legless lizard	–/– SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Not Expected	Sandy or loose soils are present in the Project Area however, moisture content is low. No occurrences have been reported within 10 miles.
Gambelia sila blunt-nosed leopard lizard	FE/SE SFP	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	Not Expected	Mammal burrows are present however, the Project Area is heavily impacted by agricultural activities. No occurrences have been reported within 10 miles.
Thamnophis gigas giant gartersnake	FT/ST	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the gartersnakes in California.	Not Expected	No canals or permanent water sources are present in the Project Area. No occurrences have been reported within 10 miles.
Birds				
Agelaius tricolor tricolored blackbird	–/ST SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Not Expected	Irrigation ponds are present adjacent to the Project Area, and the Project Area may be used for foraging. One historic occurrence has been reported (1935) within 10 miles (CNDDB 2019a). Two recent sightings (2013, 2015) within 10 miles have been reported in eBird (2019).
Athene cunicularia burrowing owl	–/– SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low Potential	California ground squirrel burrows are present within the Project Area. One occurrence (2007) has been reported within 2 miles of the Project Area (CNDDB 2019a).
Buteo swainsoni Swainson's hawk	–/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Low Potential	Limited nesting habitat, but potential foraging habitat occurs within the Project Area. Closest sighting on eBird (2018) was 1.6 miles to the east of the Project Area. No CNDDB occurrences have been reported within 10 miles.
Gymnogyps californianus California condor	FE/SE SFP	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Not Expected	Suitable habitat is absent due to agricultural activities and disturbance.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Mammals				
Antrozous pallidus pallid bat	–/– SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not Expected	Suitable roosting sites are absent. No occurrences have been reported within 10 miles.
Corynorhinus townsendii Townsend's big-eared bat	–/– SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not Expected	Suitable roosting sites (buildings, trees) are limited in the Project Area and those that are available are heavily disturbed by human activities. No occurrences have been reported within 10 miles.
Dipodomys nitratoides nitratoides Tipton kangaroo rat	FE/SE	Saltbush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley. Needs soft friable soils which escape seasonal flooding. Digs burrows in elevated soil mounds at bases of shrubs.	Not Expected	Saltbush scrub and suitable shrubs to support burrow structures are absent. No occurrences have been reported within 10 miles.
Eumops perotis californicus western mastiff bat	–/– SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Not Expected	Open, semi-arid habitat and grasslands are present however, suitable roosts are limited. No occurrences have been reported within 10 miles.
Taxidea taxus American badger	–/– SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	Suitable habitat is absent due to agricultural disturbance.
Vulpes macrotis mutica San Joaquin kit fox	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Low Potential	Grasslands are present, as is a limited prey base at specific locations within the Project Area. Nineteen historic occurrences (1971-1975) have been reported, including one within the Project Area (CNDDB 2019a).

Regional Vicinity refers to within a 9-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species FS=Federally Sensitive

SE = State Endangered ST = State Threatened SC = State Candidate

SSC = CDFW Species of Special Concern SFP = State Fully Protected

APPENDIX D.2
AQUATIC RESOURCES ASSESMENT

Rexford Solar Farm Project

Aquatic Resources Assessment

prepared for

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January 2020

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Executive Summary

On behalf of 20SD 8ME, LLC (the Applicant), Rincon Consultants, Inc. (Rincon) conducted an aquatic resources assessment for the proposed Rexford Solar Farm (Project) located in unincorporated Tulare County, California. The Project comprises 42 assessor's parcels (Project Area) totaling approximately 3,620 gross acres. For purposes of this report, the Project Area included the 42 parcels plus approximately 11.3 miles of connector line.

The assessment was conducted to determine the location and extent of waters and streambeds potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), pursuant to Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 CWA and Section 13263 of the Porter-Cologne Water Quality Act (Porter-Cologne Act), and the California Department of Fish and Wildlife (CDFW), pursuant to Sections 1600 *et seq*. of the California Fish and Game Code (CFGC). As part of Project scoping, planning, and design, this report was prepared to support project review under the California Environmental Quality Act (CEQA).

The White River, two ephemeral drainages, an irrigation ditch, and nineteen isolated seasonal wetlands were identified, delineated, and mapped within the Project Area. Potential RWQCB jurisdictional areas total 3.55 acres and potential CDFW jurisdictional areas total 2.74 acres. No riparian habitat in association with these features was present. The USACE is not expected to have regulatory authority over the delineated features in the Project Area.

1 Introduction

On behalf of 20SD 8me LLC (the Applicant), Rincon Consultants, Inc. (Rincon) conducted an aquatic resources assessment for the Rexford Solar Farm (Project), located in Tulare County, California. The assessment was conducted to determine the location and extent of waters and wetlands within the Project Area that are potentially subject to the jurisdiction of the USACE, RWQCB, or CDFW.

Any proposed development in areas identified as jurisdictional waters and/or wetlands may be subject to the permit requirements of the USACE, under Section 404 of the Clean Water Act (CWA), RWQCB under Section 401 of the CWA and Porter-Cologne Water Quality Act, and CDFW pursuant to Section 1600 *et. seq*. of the CFGC. Actual jurisdictional areas are determined by the state and federal authorities at the time that permits are requested.

1.1 Project Location

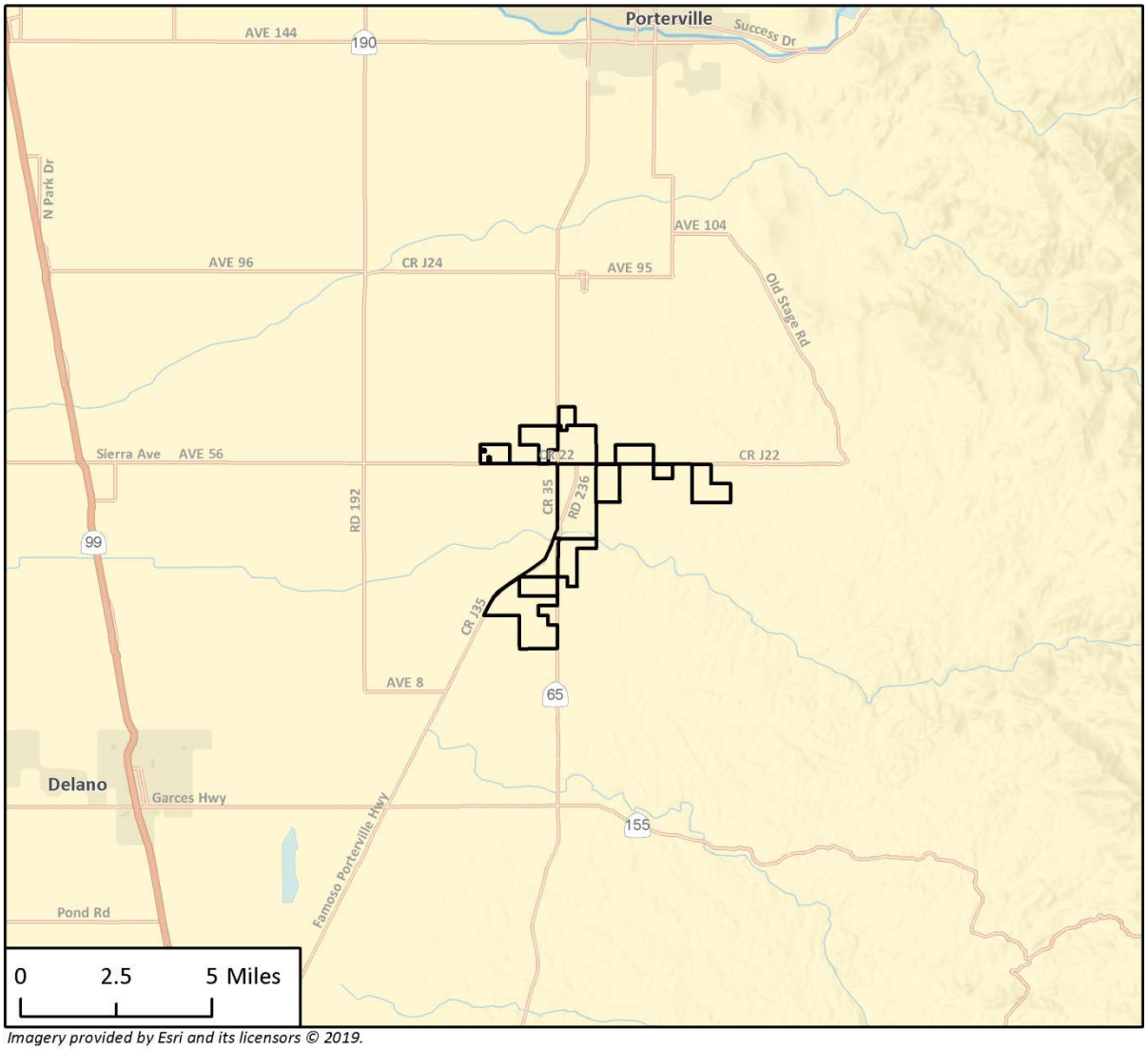
The Project comprises 42 assessor's parcels (Project Area) totaling approximately 3,620 gross acres (Project Area; Figure 1 and Figure 2). The permanent disturbance acreage associated with development of the proposed solar facility and associated infrastructure (Project Site) within the Project Area would be less than the gross acreage of the Project Area. However, this assessment included the entire Project Area and collector lines in order to assist the Applicant in siting facilities to minimize impacts to jurisdictional features. Therefore, for purposes of this report, the Project Area includes the 42 parcels (3,620 acres) plus approximately 11.3 miles of collector line. The approximate center of the Project Area is: Latitude 35.861621° North; Longitude 119.047084° West (WGS84).

The Project Area is located in unincorporated Tulare County (county), generally south of Porterville and north of Bakersfield, surrounding the community of Ducor. The southern extent of the Project Area is located between Country Route (County Route) J35 (CR-J35) and State Route 65 (SR-65) and north Avenue 16. The western extent is located north of CR-22 just east of Road 220. The eastern extent is south of CR-22 and east of Road 272, and the northern extent is located east of SR-65 and south of Avenue 68.

1.2 Project Description

The Applicant is seeking approval of a Conditional Use Permit (CUP) for the construction and operation of an up to 700 megawatt-alternating current (MW-AC) utility-scale solar farm with energy storage, known as the Rexford Solar Farm. The Project consists of a photovoltaic (PV) energy facility and energy storage system (ESS) within the Project Area. Power generated by the Project would be collected using up to 230 kV collector lines which run overhead and/or underground to a dedicated Project substation, and would then connect to the Southern California Edison (SCE) Vestal Substation (Vestal) via an overhead and/or underground gen-tie.

Figure 1 Project Area Location



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Project Area

N

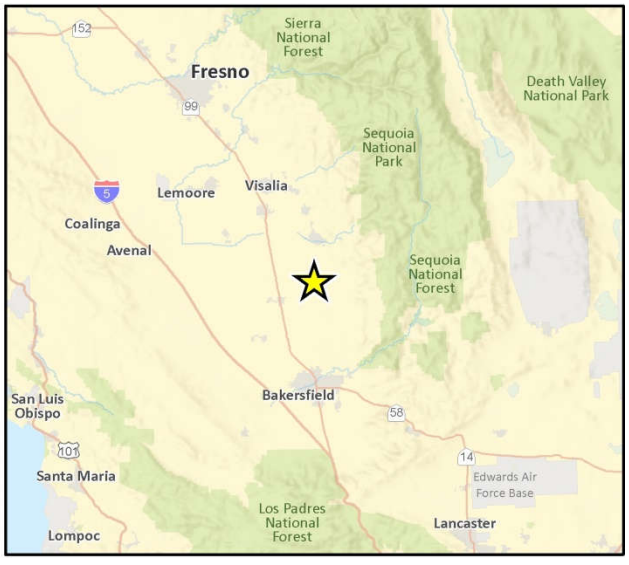

Fig 1 Regional Location

Figure 2 Project Area Overview

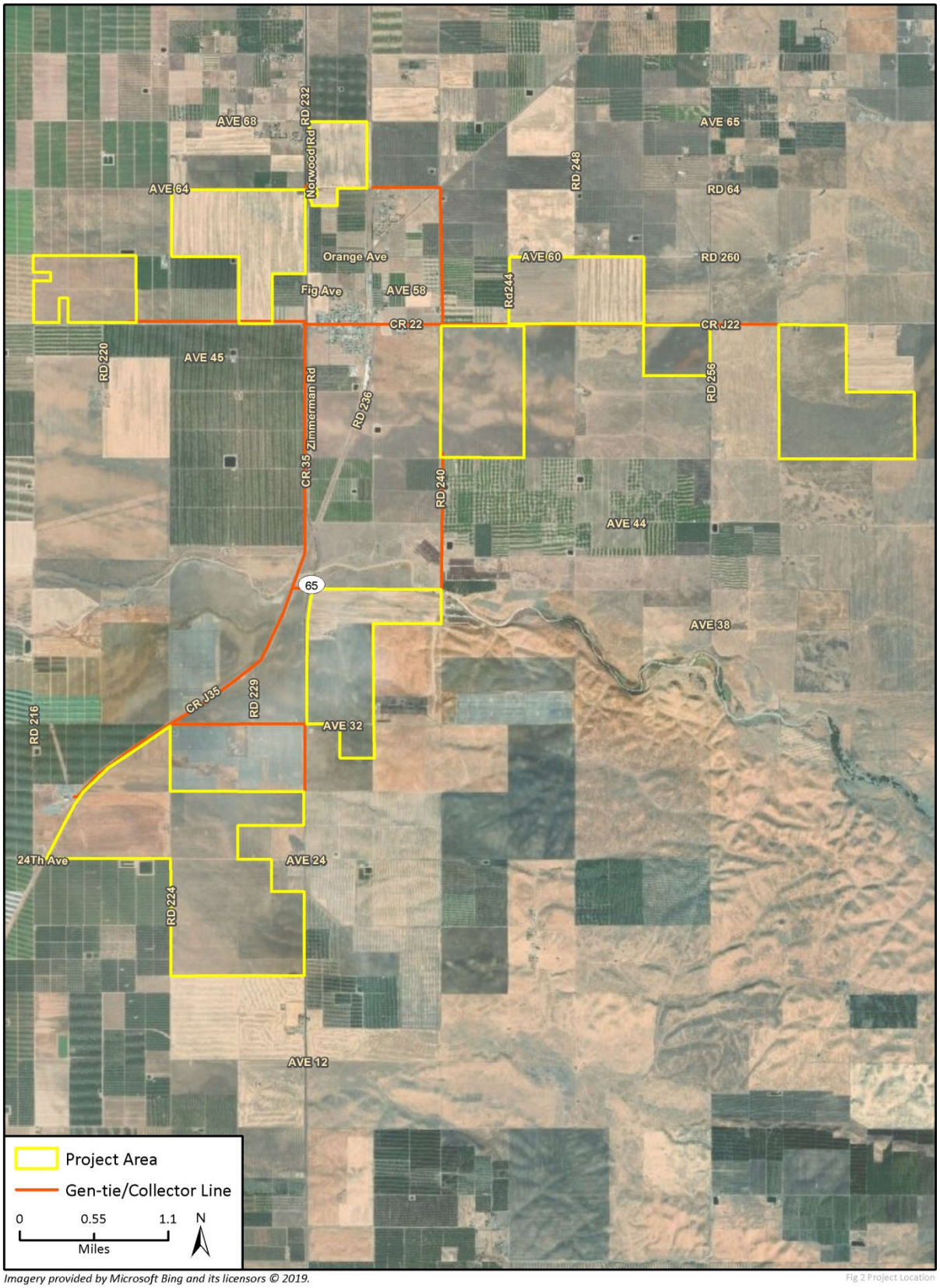

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Fig 2 Project Location

The Project would use PV panels or modules on mounting frameworks. The solar panel array would be arranged in groups called blocks, with inverter stations generally located centrally within the blocks. Foundations can extend up to 10 feet below ground and may be encased in concrete or use small concrete footings.

The Project and any associated ESS would have their own dedicated substation equipment located within the Project Site. Each substation would occupy an area of up to approximately five acres, secured separately by a chain-link fence. Substations typically include a small control building constructed of prefabricated concrete or steel housing.

The Project may include an operations and maintenance (O&M) building with associated on-site parking. The building would be steel framed with metal siding and roof panels, and approximately 40’ x 80’ in size. The Project Site would be enclosed within a chain link fence. No roadways would be affected by the Project, except as used for worker access during the construction period.

2 Methodology

This aquatic resources assessment was conducted in accordance with the most current accepted regulatory guidelines for jurisdictional delineations. The analysis began with a literature review of existing studies, aerial imagery, maps, and other publications. After completion of the literature review, a field delineation was completed to identify, describe, and map potential jurisdictional features within the Project Area. Delineated features are depicted in Figures 5 and 6 in Section 5 of this report. Rincon surveyors led by Senior Biologist Jon True and Biologist Carolynn Daman conducted fieldwork for this assessment in October 2019 and January 2020.

2.1 Literature Review and Photo Interpretation

Prior to the field survey, Rincon reviewed aerial photographs of the Project Area, regional and site specific 7.5-minute USGS topographic quadrangles (quads) including the *Ducor* and *Richgrove, California* quads; the *Soil Survey Tulare County, California, Central Part and Western Part, California* (U.S. Department of Agriculture Natural Resources Conservation System [USDA NRCS] 1982, 2003); and other available background information to better characterize the nature and extent of potentially jurisdictional waters and wetlands.

The *National Wetlands Inventory* (NWI) (United States Fish and Wildlife Service [USFWS] 2019, 2020) and the *National Hydrography Dataset* (NHD) (USGS 2019, 2020) were reviewed to determine if any wetlands or other waters had been mapped in or near the Project Area. The *National Hydric Soils List by State: California* (USDA NRCS 2019b) was also reviewed to determine if any soil map units mapped in the Project Area were classified as hydric.

Historic and recent high-resolution aerial photographs (Google Earth 2019, 2020) were examined prior to conducting field surveys to detect signatures that may indicate the potential presence of streams or wetlands. Using a Geographic Information System (GIS), areas were selected where watercourses and related geomorphic forms or units (e.g., floodplain, terrace, wetland) appeared to be potentially present. Based on aerial signatures such as changes in landscape color, vegetation density, and drainage patterns, various areas across the Project Area were identified where field investigations would be focused. Rincon imported the locations of potential jurisdictional features into an Android® tablet equipped with ESRI ArcCollector® software. The tablet was paired with a handheld Trimble® R1 Global Positioning System (GPS) with sub-meter accuracy for use in the field. The data was overlaid on high recent resolution aerial imagery for navigation and data collection.

2.2 Field Survey

After completion of the literature review, field surveys were conducted in the Project Area on October 16 and 17, 2019, and January 7, 2020. The surveys were conducted by navigating to selected areas where representative samples of potential jurisdictional features were identified during the literature review, including the areas identified via aerial photo interpretation and those mapped in the NWI and NHD. These areas were surveyed to verify the presence or absence of jurisdictional features. The surveyors also inspected the perimeter of the Project Area to confirm if any potential waters cross into or out of the area. Potential jurisdictional areas including ephemeral

streams that exhibit an ordinary high water mark (OHWM) and that might constitute waters of the U.S. or state were identified. The Project Area was examined for the presence of defined channels with characteristic bed and bank features and indicators of water flow. The area was also surveyed for the presence of any features that contained the characteristics of wetlands as defined by the USACE. The landforms, vegetation, hydrology, and soil conditions were noted where these characteristics were relevant to identification of potential jurisdictional features.

Current federal and state methods and guidelines were used to identify and delineate potential jurisdictional areas, as follows.

Non-Wetland Waters of the United States

Where present in the Project Area, the lateral limits (i.e., width) of USACE jurisdiction for non-wetland waters were determined by the presence of physical characteristics indicative of the OHWM. The OHWM was identified in accordance with the applicable Code of Federal Regulations (CFR) sections (33 CFR 328.3 and 33 CFR 328.4) and Regulatory Guidance Letter 05-02 (USACE 2005), as well as in reference to various relevant technical publications, including, but not limited to, *A Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States* (USACE 2008a). The *USACE Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest* and *USACE Jurisdictional Determination Form Instructional Guidebook* were also used to delineate both non-wetland and wetland waters.

Rincon examined potential jurisdictional streams for an OHWM, surveying for a line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, sediment deposition and transport, scour, and other indicators.

Additionally, Rincon evaluated sources of water, potential connections to interstate waters, and other factors that affect whether waters qualify as “waters of the United States” under current regulations (i.e., the USACE/USEPA 2015 Clean Water Rule, 33 CFR Part 328). Effective November 11, 2019, the 2015 Clean Water Rule is repealed and replaced with the regulations and guidance that existed prior to the rule. The 2015 rule is currently in effect in California, and grants jurisdictional status to “tributaries,” regardless of flow and hydroperiod (e.g. perennial, intermittent, ephemeral). The prior regulations and guidance, which will revert back to effect on November 11, 2019, require demonstration of a case-specific “significant nexus” before ephemeral streams are considered jurisdictional. Currently the overall plan is to finalize a new rule that excludes ephemeral streams from jurisdiction, planned for February 2020.

Given the Clean Water Rule is set to be repealed and the previous regulations and regulatory guidance will be in effect, Rincon also considered the delineation of potential USACE jurisdiction in light of the upcoming changes. In other words, if the ephemeral features in the Project Area were to be jurisdictional at this point in time, after November 11 they would not be granted jurisdictional status unless shown to have a significant nexus with traditionally navigable waters. Note that in this case, the waters in the Project Area do not have a significant nexus and therefore would still not be jurisdictional after the rule is repealed.

Representative photographs are included in Appendix B. OHWM datasheets completed for a representative sample of drainage features that exhibited an OHWM and are included in Appendix C. Datasheets were completed at sampling points in the White River and in an ephemeral drainage along SR-65 between Avenue 24 and Avenue 16.

Wetland Waters of the United States

The Project Area was surveyed for areas supporting plant species indicative of wetlands (specifically, hydrophytic vegetation), hydric soils, and wetland hydrology, and representative sampling points were evaluated according to routine wetland delineation procedures, including the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008b). The *Arid West 2016 Regional Wetland Plant List* (Lichvar et al. 2016) was used to determine the wetland status of the vegetation by the following indicator status categories: Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate Wetland (OBL). A more detailed regulatory definition of wetlands and indicator status are provided in Appendix A. Wetland Determination Data Forms were completed at seven locations where potential wetlands were located across the Project Area.

Waters of the State

The term "isolated waters" is applied generally to waters or wetlands that are not connected by surface or shallow subsurface water to a river, lake, ocean, or other navigable or interstate water. In the case of isolated wetland features or those displaying an OHWM, RWQCB still considers such wetlands and drainages to be jurisdictional waters of the state pursuant to the Porter-Cologne Act. While there are no agency-adopted methods for delineating waters of the state, in practice the USACE guidelines for delineating federal jurisdictional limits are typically used to determine the limits of waters subject to RWQCB jurisdiction in the Central Valley Basin (RWQCB Region 5). Therefore, these features were mapped using the delineation methodologies utilized by the USACE. A more detailed regulatory definition of RWQCB Jurisdiction can be found in Appendix A.

CDFW Streambed and Riparian Habitat

Section 1602 of the CFGC requires an entity to notify the CDFW before conducting any activity that would divert obstruct, or substantially alter a streambed. Once notified, the CDFW may require that a Streambed Alteration Agreement be executed before the activity may proceed. The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. Considering this, four sources of information were reviewed and considered in determining the appropriate limits of CDFW jurisdiction within the site, as discussed below. The principles presented in these materials were used to guide the delineation of on-site streams, with consideration given to the relevance (i.e., jurisdiction, applicability) of each source to the project and resources at hand.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel

  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

The tenets listed above, among others, were applied within the Project Area in an attempt to determine the limits of on-site streams.

2.3 Data Collection and Processing

The extents of potential jurisdictional features in the Project Area and photo locations were mapped using the GPS and field tablet. The data were subsequently transferred to Rincon's GIS to produce Delineation Figures 5 and 6, presented in Section 5. Representative photographs of potential jurisdictional waters and site conditions are presented in Appendix B.

3 Delineation Results

This section presents the results of the jurisdictional delineation, and includes discussions of the environmental setting, descriptions of the major vegetation units observed, soil types present, and a discussion of local hydrology in the Project Area.

3.1 Environmental Setting

The Project Area is located in the southeastern portion of the San Joaquin Valley, approximately eight miles to the west of the western slopes of the Sierra Nevada Mountains. The valley is characterized by valley grassland, agriculture, rivers with riparian corridors, irrigation canals, and drainage ditches. The Project Area is located east of the Tulare Lakebed and the Friant-Kern Canal, northeast of Lake Woollomes and southwest of Lake Success and the Tule River. Regional land uses in the vicinity primarily include active agricultural operations.

Topography across the Project Area is relatively level. A few rolling hills with low to moderate slope gradients are present throughout the Project Area. Elevations range from 478 feet above mean sea level (amsl) in the northwest to 620 feet amsl in the northeast.

The southeastern San Joaquin Valley climate is characterized by hot, dry summers and dense tule fog in the winter. According to Western Regional Climate Center (WRCC) data records between 1902 and 2004, average annual temperatures at the Porterville Station (Station No. 047077) range between 49.1 and 78.3 degrees Fahrenheit (F°), with the warmest temperatures occurring between July and August with an average high of 99 F°. The coldest temperatures occur between December and January with an average low of 36.5 F°. Average annual rainfall in the vicinity is approximately 10.9 inches, with most precipitation occurring between December and March (Western Regional Climate Center 2019).

The Project Area has been historically used as farmland and is subject to various ongoing disturbances related to active agriculture production.

3.2 Vegetation

According to the Jepson Manual, the Project Area is located in the Great Valley Region of the California Floristic Province (UCB 2019). Vegetation types in the San Joaquin Valley are influenced strongly by the heavy disturbances from agriculture activities. As described in the Draft Biological Resources Assessment (BRA) for the Project (Rincon 2020), seven land cover types were identified in the Project Area, as shown in Figure 3a through Figure 3d. Note that vegetation mapping was not conducted along the collector lines. General characteristics of Fallow Agricultural Fields, Agricultural Fields, and Developed areas are briefly summarized below.

Figure 3a Vegetation and Land Cover Types within the Project Area

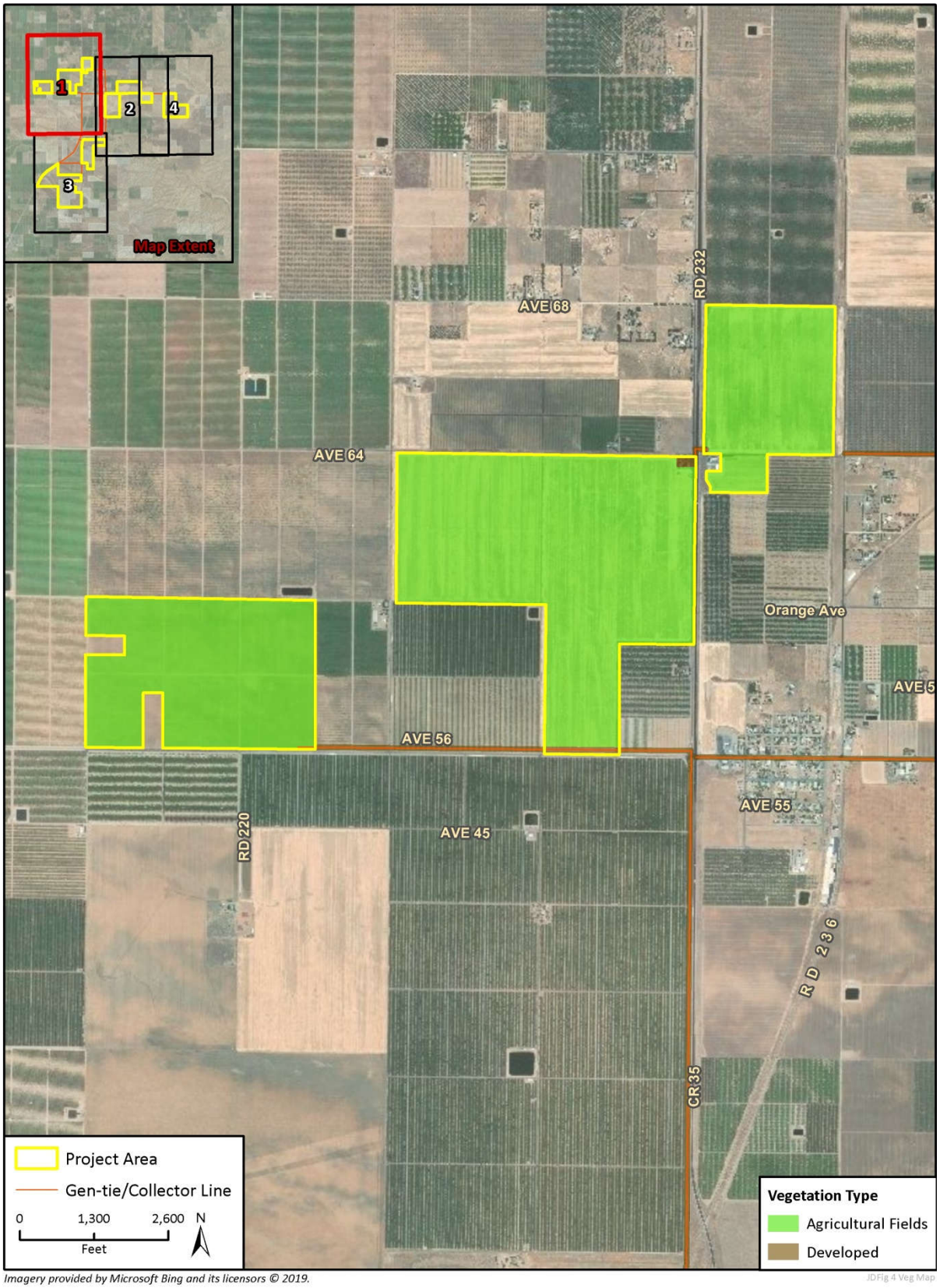
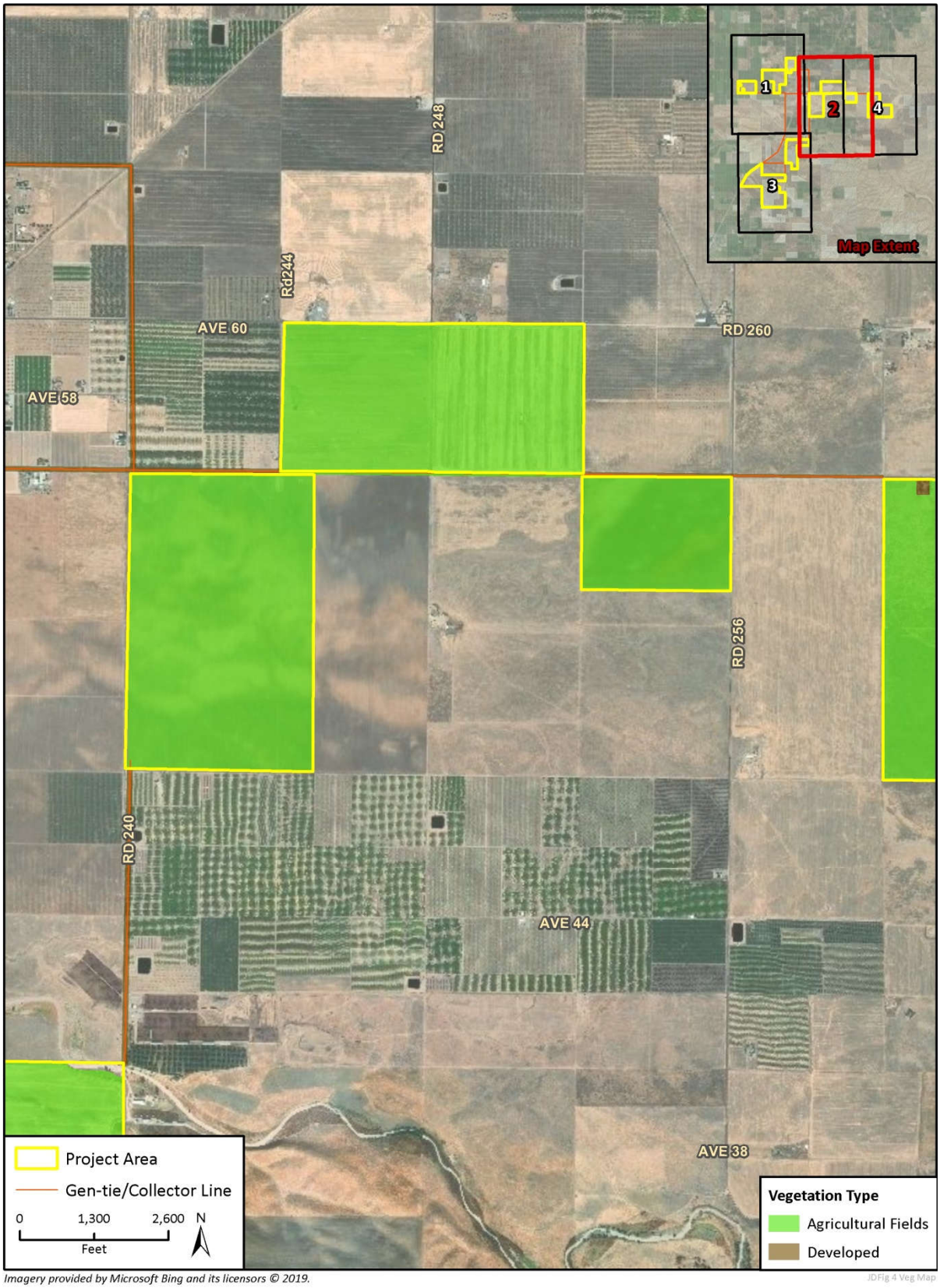


Figure 3b Vegetation and Land Cover Types within the Project Area



Imagery provided by Microsoft Bing and its licensors © 2019.

JDFig 4 Veg Map

Figure 3c Vegetation and Land Cover Types within the Project Area

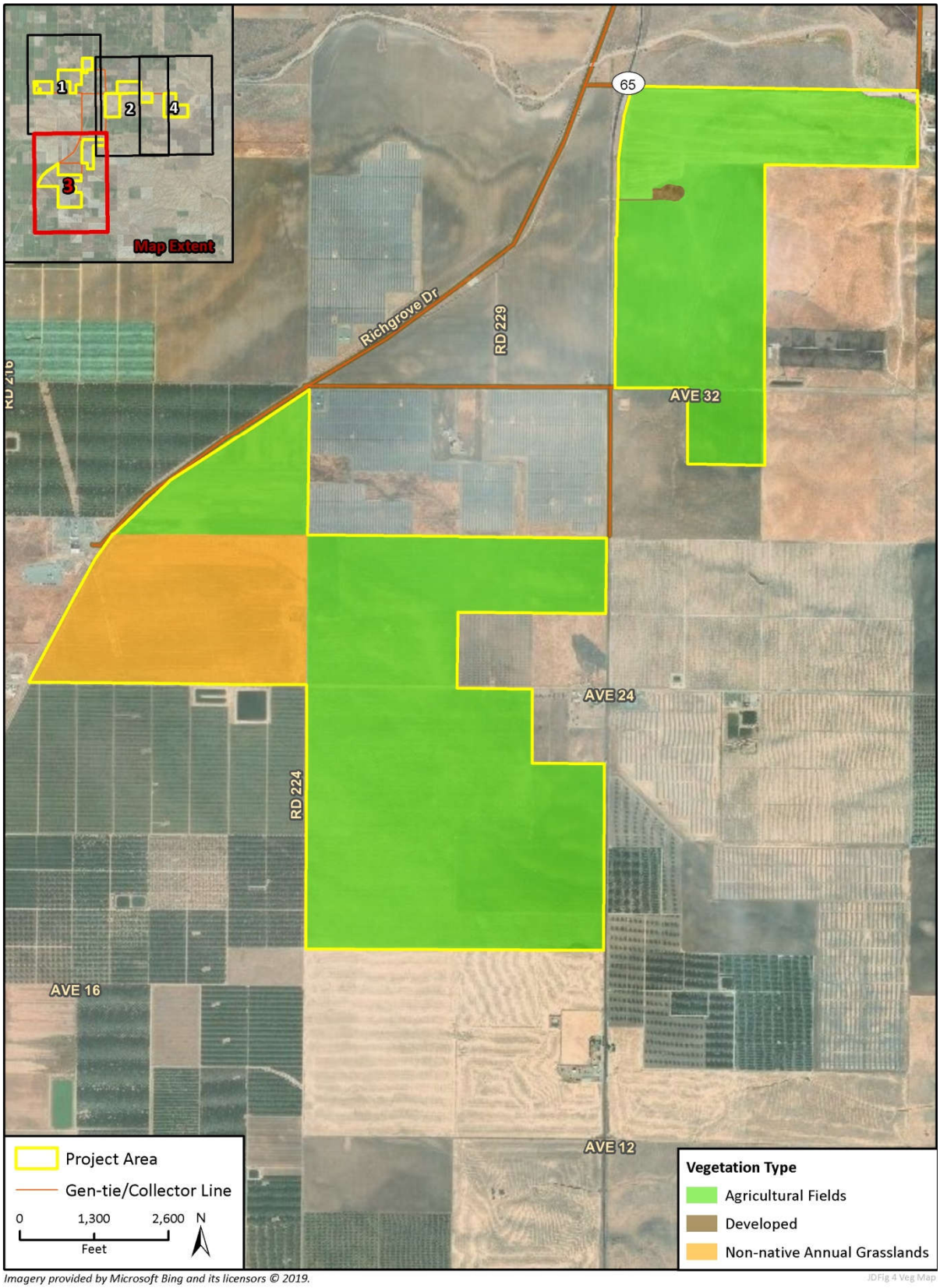
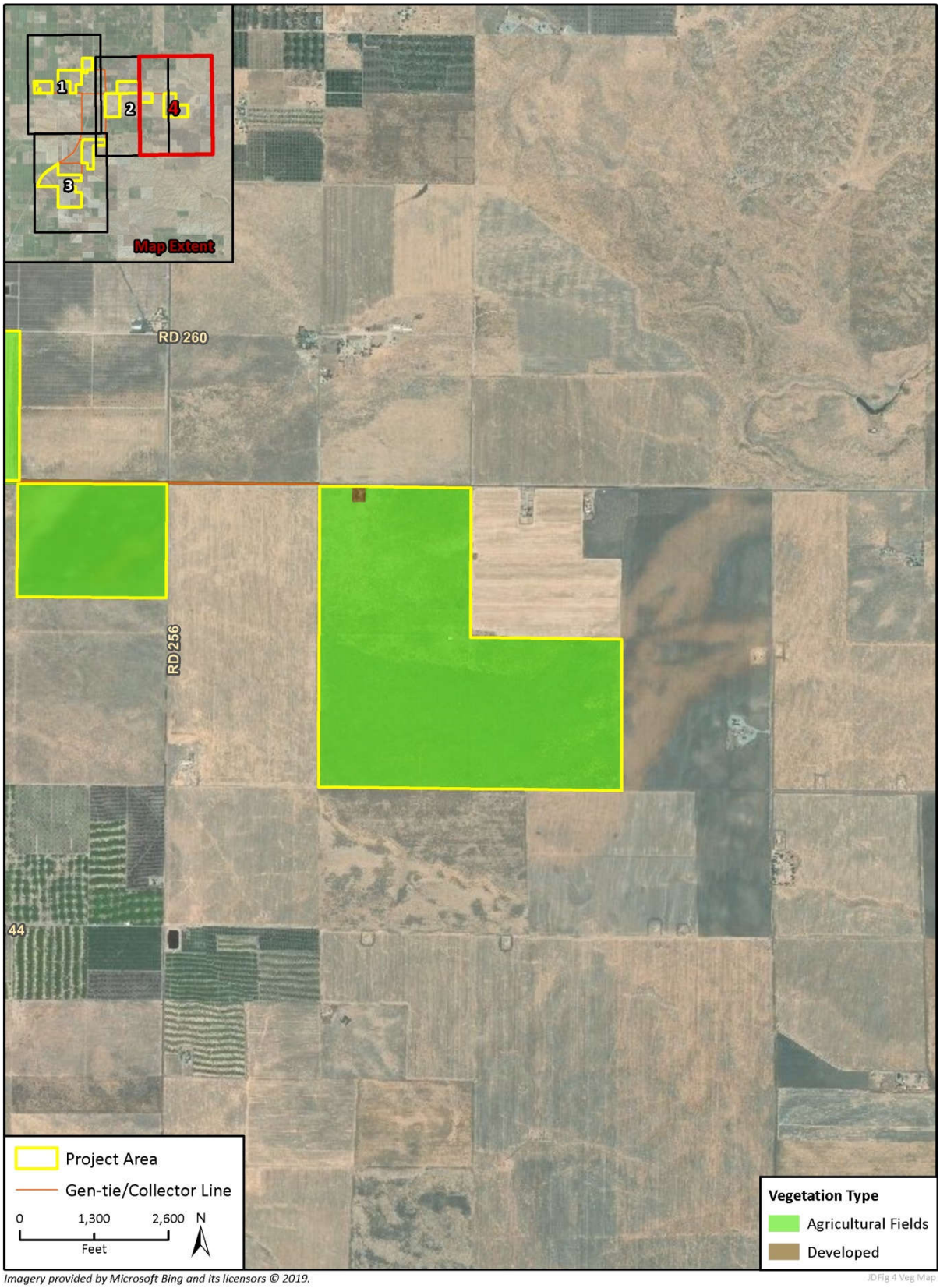


Figure 3d Vegetation and Land Cover Types within the Project Area



3.2.1 Fallow Agricultural Field

The Project Area contains approximately 249 acres of fallow agricultural fields. The dominant species observed in this community are non-native annual grasses such as bromes (*Bromus* spp.) and wild oats (*Avena* spp.). This community most closely resembles the *Avena* (*barbara, fatua*) Semi-Natural Herbaceous Alliance described by Sawyer et al. (2009). This vegetation community occurs within three parcels in the southwest of the Project Area.

3.2.2 Agricultural Fields

Active agricultural fields comprise more than 85 percent of the Project Area. These agricultural areas are dominated by non-native grasses including winter wheat (*Triticum* sp.), wild oats (*Avena* spp.), barley (*Hordeum* spp.), and bromes (*Bromus* spp.). Ruderal species including Russian thistle (*Salsola tragus* and *S. australis*) and vinegar weed (*Trichostema lanceolatum*) were commonly observed in these areas, occurring as co-dominant species in some areas prior to annual plowing and in cattle grazing areas. The agricultural fields meet the definition of Dryland Grain Crops or Evergreen Orchard, in the case of the citrus groves, described in the California Wildlife Habitat Relationships System (CWHRS) (CDFW 2019). While these grain/ruderal fields have been regularly subject to agricultural disturbance, the presence of large Russian thistle patches over much of the area in October suggests that the ground had not been disturbed during the past year. Several of the vegetated fields have been grazed by sheep, and as of October 2019, about half of the Project Area had been recently plowed or disked, falling under the CWHRS definition of barren land cover. Included within this habitat are numerous dirt roads constructed for access to agricultural areas and power transmission lines.

3.2.3 Developed

Developed areas in the Project Area are those which have been modified such that most or all vegetation has been removed or only small areas of ornamental vegetation are present. Roads and structures are included within this land cover type. In some cases vegetation from adjacent areas may overhang and ornamental trees such as eucalyptus (*Eucalyptus* sp.) are present.

3.3 Hydrology

The Project Area is located within the Lower Deer Creek and the Lower White River watersheds (Hydrologic Unit Codes 1803000509 and 1803000505, respectively). The only potentially jurisdictional feature that exits the Project Area is the White River, as discussed below. Overland drainage is very gradual from east to west. Hydromodification has fragmented drainage flow throughout the Project Area primarily from active agriculture operations including frequent disking, tilling, and maintenance of roads.

The NHD and NWI depict numerous ephemeral drainage features and one intermittent feature (White River) in the Project Area. Note that both databases indicate mapped drainages in roughly the same locations (i.e. all drainages mapped in the NWI were similarly mapped in the NHD). The river originates approximately 25 miles to the east and collects various tributaries. After passing through the Project Area, it is channelized and routinely maintained further downstream (west) prior to its termination into agriculture fields approximately 17 miles west of the Project Area. The river is discussion in more detail in Section 4.1.

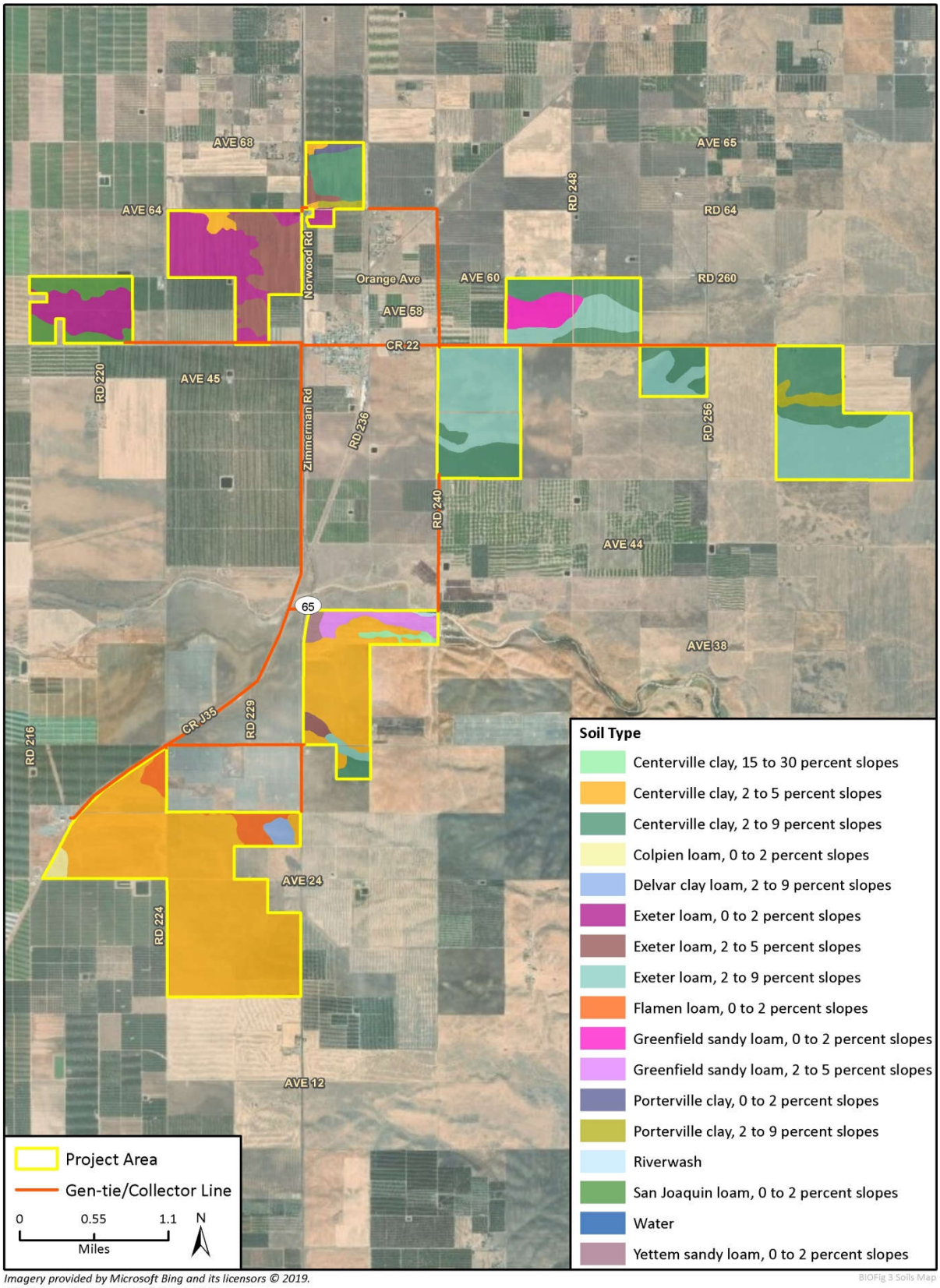
3.4 Soils

Based on data from the *USDA Soil Conservation Service Soil Survey of Tulare County, Central Part* (USDA NRCS 1982) and Western Part (USDA NRCS 2003), the Project Area contains 16 mapped soil units (Figure 4) including:

- Centerville clay, 15 to 30 percent slopes
- Centerville clay, 2 to 5 percent slopes*
- Centerville clay, 2 to 9 percent slopes
- Colpien loam, 0 to 2 percent slopes
- Delvar clay loam, 2 to 9 percent slopes*
- Exeter loam, 0 to2 percent slopes*
- Exeter loam, 2 to 5 percent slopes
- Exeter loam, 2 to 9 percent slopes*
- Flamen loam, 0 to 2 percent slopes*
- Greenfield sandy loam, 0 to 2 percent slopes
- Greenfield sandy loam, 2 to 5 percent slopes
- Porterville clay, 0 to 2 percent slopes*
- Porterville clay, 2 to 9 percent slopes*
- Riverwash*
- San Joaquin loam, 0 to 2 percent slopes
- Water
- Yettem sandy loam, 0 to 2 percent slopes*

Figure 4 depicts the mapped soil units in the Project Area. Nine of these soils are listed on the *NRCS Hydric Soils List* (USDA NRCS 2019b) and are indicated with an asterisk above. The majority of the Project Area is underlain by sands, loamy sand, and sandy loam. Soil series summaries are provided below.

Figure 4 Soils within the Project Area



Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by SSURGO, 2019.

BIOFig 3 Soils Map

3.4.1 Centerville Series

Centerville soils are well-drained and formed in alluvium from mostly granitic sources. This soil series is found on alluvial fans and dissected stream terraces with slopes of 0 to 30 percent at elevations of 25 to 2100 feet. These moderately alkaline soils have slow permeability and are used mainly for irrigated oranges and dryland barley, wheat, and rangeland. In uncultivated areas, vegetation is annual grasses and forbs. Centerville clay, 2 to 5 percent slopes, is listed as a hydric soil.

3.4.2 Colpien Series

Colpien soils are very deep, moderately well-drained, and found on terraces that formed in alluvium from mostly granitic rock. This soil series has slopes of 0 to 2 percent at elevations of 220 to 550 feet. These soils are neutral to moderately alkaline, have moderately slow permeability and are used as irrigated cropland to grow a variety of crops and produce, dairy and cattle production, and building site development.

3.4.3 Delvar Series

Delvar soils are very deep, well-drained and formed in mixed alluvium from granitic and meta-sedimentary rock. This soil series is found on alluvial fans and stabilized floodplains with slopes of 2 to 30 percent at elevations of 400 to 2000 feet. These slightly acidic to moderately alkaline soils have slow permeability and are used and are used for irrigated crops and dryland grain, dairy and cattle production, and building site development. Delvar clay loam, 2 to 9 percent slopes, is listed as a hydric soil.

3.4.4 Exeter Series

Soils in the Exeter series are moderately deep to a duripan, well-drained, and formed in alluvium from mainly granitic sources. This soil series is found on alluvial fans and stream terraces floodplains with slopes of 0 to 9 percent at elevations of 20 to 700 feet. These soils range from slightly acidic to moderately alkaline and have slow permeability and are irrigated to grow a variety of crops and produce. Exeter soils are also used for dairy and cattle production and building site development. Native vegetation is mainly annual grasses and forbs. Exeter loam, 2 to 9 percent slopes, is listed as a hydric soil.

3.4.5 Flamen Series

Soils in the Flamen series are moderately deep to a duripan, moderately well-drained, and formed in alluvium from mainly granitic sources. Flamen soils are well-drained and formed in alluvium from mostly sedimentary rock. This soil series is found on stream terraces and have slopes of 0 to 2 percent at elevations of 260 to 550 feet. These slightly acidic to moderately alkaline soils have moderate permeability above the duripan and are used for irrigated crops and orchards, dairy and cattle production, and building site development. Flamen loam, 0 to 2 percent slopes, is listed as a hydric soil.

3.4.6 Greenfield Series

Greenfield soils are deep, well-drained and formed in coarse alluvium from granitic and mixed rocks. This soil series is found on alluvial fans and terraces with slopes of 0 to 30 percent at elevations of 300 to 850 feet. These mildly alkaline soils have moderately rapid permeability and are used for a

variety of field, forage and fruit crops, along with dryland grain and pasture. In uncultivated areas vegetation consists of annual grass, forbs, and some shrubs and oaks.

3.4.7 Porterville Series

Porterville soils are deep, well-drained and formed in fine alluvium from basic and metabasic igneous rock. This soil series is found on fans foothills with slopes of 0 to 15 percent. At elevations ranging from below 2000 feet and over 4500 feet, these neutral to moderately alkaline soils have slow permeability and are used mainly for range pasture, although irrigated orchards are sometimes planted. Native vegetation includes annual grasses, burclover, herbs, and sparse shrubs. Porterville clay, 0 to 2 percent slopes, and Porterville clay, 2 to 9 percent slopes, are listed as a hydric soils.

3.4.8 Riverwash

Riverwash consists of recent deposits of gravel, sand, and silt alluvium along streams and tributaries. During floods, these alluvial materials can shift readily, responding to processes of erosion and deposition. Riverwash is listed as a hydric soil.

3.4.9 San Joaquin Series

Soils in the San Joaquin series are moderately deep to a duripan, moderately well to well-drained, and formed in alluvium from mixed but dominantly granitic sources. This soil series is found on undulating low terraces with slopes of 0 to 9 percent at elevations of 20 to 500 feet. These moderately acid to moderately alkaline soils have very slow permeability and are used mainly for grazing, growing of small grains and rice, as well as fruits, nuts, and vineyards.

3.4.10 Yettem Series

Yettem soils are very deep, well-drained, and formed in alluvium from granitic sources. This soil series is found on alluvial fans and floodplains with slopes of 0 to 5 percent at elevations of 225 to 1500 feet. These slightly acidic soils have moderately rapid permeability and are used for annual pasture and crops such as oranges, plums, olives, walnuts, and grapes. In uncultivated areas these soils support annual grasses and forbs. A typical soil profile includes several layers of sandy loam of various types, loamy sand, or gravelly equivalents of each. Yettem sandy loam, 0 to 2 percent slopes, is listed as a hydric soil.

4 Assessment of Jurisdictional Waters and Wetlands

This section presents the results of the assessment of delineated features potentially under the jurisdiction of USACE, RWQCB, and CDFW in the Project Area. Delineated features include a reach of the White River, two ephemeral drainages, an irrigation ditch, and nineteen isolated seasonal wetlands. Representative photographs of potential jurisdictional features are provided in Appendix B, and data forms are provided in Appendix C.

4.1 White River

The White River originates approximately 25 miles to the east of the Project Area and collects various tributaries including Speas Creek, Arrastre Creek, Coarse Gold Creek, Coho Creek, and Chalaney Creek. After passing through the Project Area, it is channelized and routinely maintained further downstream prior to its termination into agriculture fields approximately 17 miles west of the Project Area. It terminates 2.3 miles west of Road 218, which is west of Highway 99, and south of White Road Avenue, approximately 3.5 miles southwest of the community of Earlimart. It is not navigable and does not connect to any downstream waters.

The river enters the Project Area from the east and passes west through a concrete culvert under Road 240 as well as under the collector line location parallel to CR-J35 (Figures 5d, 5e, 6a, 6b). The river is mapped as intermittent in the NWI. Based on the literature review and field surveys at a time when the river was dry, the river conveys intermittent flow through the Project Area during the rainy season between December and March. It is likely that it also conveys irrigation runoff from adjacent active agriculture fields sporadically throughout the year.

Within the project limits, the river is predominately a single thread, low-flow channel with occasional vegetated islands within the OHWM (Appendix B, Photographs 1 and 2). The OHWM is clearly distinguished by a change in vegetation, change in sediment, scouring, and a well-defined break in slope. The OHWM widths average approximately 100 feet near Road 240 and approximately 50 feet in the CR-J35 collector line location. Near Road 240, the top of bank extends 25 feet from the edge of the OHWM on the south side of the river, and four feet on the north side of the river. At the CR-J35 collector line location, the banks extend four feet beyond the OHWM on both sides. Drift deposits were also observed within the OHWM downstream of the Road 240 crossing and upstream of CR-J35.

The north bank is steep and the south bank is gently inclined. The banks are vegetated with mustard (*Hirschfeldia incana,* UPL), tumbleweed *(Amaranthus albus,* FACU), cocklebur (*Xanthium strumarium,* FAC) and sunflower (*Helianthus annuus,* FACU). The banks directly west of Road 240 are highly modified, containing berms with broken concrete and native soil. Banks at the CR-J35 crossing are extremely steep and densely vegetated with upland species including mustard, tumbleweed, sunflower, and prickly lettuce (*Lactuca serriola,* FACU).

A low terrace was observed at the Road 240 location on the south side of the river which may receive high water flows during flood events. Due to heavy grazing in this location, most vegetation

was unidentifiable aside from one red willow (*Salix laevigata*, FACW). A slight depression within the terrace was present; therefore, a USACE wetland determination data form was completed in this location (Appendix C, Wetland Determination Data Form SP-1). No indicators of hydric soils were observed in the sampling point soil pit and it was determined that the location was not within a wetland. Based on the landscape position (low terrace), and the presence of the willow tree, this location along the river was initially identified as having a higher potential to contain wetland characteristics. Since the location was determined to not be a wetland, we assumed that no wetlands were present adjacent to the river, and this was confirmed during field surveys.

Vegetation was absent within the OHWM of the section of the River within the project boundary. Small patches of rabbit's foot grass (*Polypogon monspeliensis,* FACW), two red willows, and one blue elderberry *(Sambucus mexicana ssp. caerulea*, FACU) were observed adjacent to the river at the Road 240 location, and three blue elderberry shrubs were observed near the CR-J35 collector line location. These few individuals did not constitute riparian habitat since they were disjointed and did not form a continuous riparian vegetation community. Nonetheless they were within the banks of the river and therefore were included in the delineation of potential CDFW jurisdiction. The majority of the vegetation adjacent to the White River had been heavily grazed.

The riverbed contained coarse to medium sand substrate and had been disturbed by farm equipment west of the Road 240 Bridge. Wetland indicators were not present.

West of the Project Area, the river terminates into inactive agriculture fields and has no connection to downstream jurisdictional waters; therefore is isolated and not regulated by USACE, but may be regulated by RWQCB and CDFW.

4.2 Ephemeral Drainages

Sixteen streams are mapped in the NWI within the Project Area. They are classified as riverine, intermittently flooded streambeds (Cowardin code R4SBC). The NHD mapping data is similar to the NWI and ephemeral stream features are depicted in the same locations. For reference, the locations of mapped streams are shown on Figures 5 and 6. Rincon investigated all areas mapped as streams in NWI and NHD during field surveys to confirm the presence or absence of jurisdictional features.

The majority of areas mapped as stream features did not contain any evidence of flow or indicators of an OHWM, and thus were not delineated as potential jurisdictional drainages (Appendix B, Photographs 3, 4, 5, 18, and 19). All mapped "stream" features were within active farm fields, on level ground or at the toes of very gently sloped low hills. A review of historic and recent aerial photos (Google Earth 2019, 2020) indicated that these features have been subject to ongoing land disturbances from active agriculture operations. During the surveys Rincon confirmed that all features were regularly tilled, mowed, grazed, and otherwise disturbed, and none of the features would be considered a stream at this time.

Based on the literature review, aerial photo interpretation, and indicators of water flow and OHWM observed in the field, two ephemeral drainages (ED) and one irrigation ditch were identified as potentially jurisdictional. ED-1 is shown on Figures 5g and 6c, ED-2 is shown on Figures 5d and 6h, and the ditch is shown on Figure 5b. Locations and descriptions of these features are provided below.

One drainage (ED-1) entered the Project Area east of a corrugated pipe culvert under SR-65 between Avenue 24 and Avenue 16 (Appendix B, Photograph 6). This drainage consists of a narrow single-thread channel with a defined streambed and OHWM approximately one foot in width. This

feature appears to convey water for short durations during rain events from roadway runoff or adjacent agriculture runoff. Channel bed and banks, and a conspicuous change in vegetation cover, were clearly evident. The drainage was generally unvegetated or sparsely vegetated and was recently disturbed by vehicles and agricultural equipment. Non-native ruderal vegetation was dominant on the banks. The channel meandered along the toe of a low hill slope for approximately 230 feet to the west before it terminated in a level pasture area, dissipating into the surrounding landscape. No indicators of flow or OHWM were present beyond that point, and the drainage did not connect to any downstream waters.

A second drainage (ED-2) entered the Project Area through a 12-inch culvert that conveys road runoff from the north side of CR-22 (Appendix B, Photograph 17). This drainage consisted of a narrow single-thread channel with a defined streambed and OHWM approximately 3 foot in width. This feature appears to convey water for short durations during rain events from roadway runoff or limited flows from upslope agriculture fields. A conspicuous lack of vegetation cover was clearly evident in the channel bed. The drainage was recently disturbed grazing cattle. Non-native ruderal upland vegetation was dominant in the adjacent areas beyond the weakly defined banks. The channel transports runoff for approximately 345 feet to the south-southwest before it terminated in a mostly level pasture area, where it dissipated into the surrounding landscape. No indicators of flow or OHWM were present beyond that point, and the drainage did not connect to any downstream waters.

An irrigation ditch (Appendix B, Photograph 12), located north of CR-22 and directly adjacent to Road 244, connected to one of the isolated wetlands discussed below. This ditch was excavated for irrigation purposes and originates at an irrigation outlet valve located adjacent to an active orange grove. Irrigation water flow appears to run parallel to Road 244 from north to south. The ditch was approximately two feet wide and predominantly devoid of vegetation. Soil cracking was observed in the bottom. Although the ditch connects to Isolated Wetland 5, the wetland is isolated with no direct connectivity to navigable or interstate waters, and thus would not be regulated by the USACE. However, the RWQCB may claim jurisdiction over this feature.

4.3 Isolated Seasonal Wetlands

One depressional wetland feature was mapped in the NWI within the Project Area. This feature is shown on Figure 6f. Note that the NHD only contains mapped stream/drainage features, and therefore this wetland feature was not mapped. East of CR-J35 and north of Avenue 24, the one location mapped in the NWI as a freshwater emergent wetland was investigated. Based on site conditions in conjunction with the NWI mapping, this was the location most likely to contain wetland characteristics in the area. A wetland determination data form was completed. Due to a recent fire, no hydrophytic vegetation was observed. Based on the sampling point data, the location lacked wetland hydrology and hydric soils (Appendix B, Photograph 7; Appendix C, Wetland Determination Form SP-6). Therefore, this location was determined to not be a wetland, and since it was the location most likely to contain wetland conditions, Rincon assumed that no other wetlands were present within this area. This was confirmed through visual observations across the Project Area. The fact that majority of these areas has been regularly tilled for active agricultural use over many years indicates that they likely do not collect or retain water for long durations.

Seven isolated wetlands were present north of CR-22 and east of Road 244. They are shown on Figures 5b and 5c. These areas were not mapped in the NWI but were observed during the field survey on October 17, 2019 (Appendix B, Photographs 8, 9, 10, and 11). In this area, a grain crop had

recently been harvested but lower elevation depressional areas were avoided, which made the depressions easily identifiable from a distance. The fact that these areas had been avoided and are not regularly tilled indicates that they likely collect and retain water for longer durations.

Wetland determination data forms were completed at three representative locations, and wetlands were determined to be present (Appendix C, Wetland Determination Forms SP-3, SP-4, and SP-5). Dominant plant species included toadrush (*Juncus bufonius,* FACW), rabbit's foot grass (*Polypogon monspeliensis,* FACW), and knotweed (*Polygonum aviculare ssp. depressum,* FAC). Redox depressions and large surface soil cracks were present. One upland sample point was collected where dominant vegetation transitioned to upland species including wild oat (*Avena fatua*, UPL), horseweed (*Erigeron canadensis*, FACU) and vinegar weed (FACU), which aided in determination of the wetland-upland boundary. The depressions were situated between one to three feet below the tilled surface of the agriculture field, and they are visible on aerial imagery.

Soils was extremely hard and consistent with loamy hardpans in the USDA NRCS Exeter loam, 0 to 2 percent slope, and Exeter loam, 2 to 9 percent slope, soil units. In addition to natural rainfall, supplemental agricultural irrigation likely contributes to water ponding in these depressions where harder, less permeable soils are at the surface.

All but one of these depressional wetlands are isolated and do not connect to, and are not adjacent to, other potentially jurisdictional waters. The nearest potential jurisdictional water is the White River which is approximately 2.15 miles to the south. Isolated Wetland 5 receives agricultural irrigation water inputs from the irrigation ditch discussed above, but the depression is not connected to any other jurisdictional waters downstream, nor is it adjacent to any jurisdictional waters.

In addition, during the field survey on January 7, 2020, twelve isolated seasonal wetlands were identified and delineated south of CR-22 and east of Road 260. They are shown on Figures 5i and 5j, and Photograph 20 shows Isolated Wetland 15. The wetlands are located in active agricultural fields used for cattle grazing since 2005. These features were not mapped in the NWI but were identified as potential wetlands through pre-field aerial photo interpretation. Wetland determination data forms were completed at one representative location (Wetland 15), and a wetland was determined to be present (Appendix B, Photograph 20; Appendix C, Wetland Determination Form SP-7). Exploratory soil pits were dug at each of the other wetland locations, and indicators of wetland hydrology and vegetation were observed. The other wetlands contained similar characteristics, including prominent indicators of wetland hydrology and hydric soils. Based on the positive wetland determination at the sampled wetland (#15), the other similar depressional features were also delineated and mapped as wetlands. A brief summary is provided below.

The wetlands were located in small closed depressions where water collects and persists longer than surrounding upland areas. The depressions ranged from 1 to 3 feet in depth. Saturation was visible on historic aerial imagery. Soil surfaces were extremely hard and consistent with hardpans in the NRCS Centerville clay, 2 to 9 percent slopes, soil units. Distinct redoximorphic concentrations were present throughout the soil matrix in all of the wetlands to an average depth of 8 inches, and deep surface soil cracking was present. Oxidized rhizospheres along living roots were evident in most wetlands.

Vegetation cover in the wetlands was significantly lower than in the surrounding uplands, indicating longer-term inundation and saturation. A predominance of hydrophytic vegetation was not observed; species composition was similar to the adjacent uplands. However, the determination of hydrophytic vegetation was problematic due to heavy long-term cattle grazing. Long-term grazing

can cause shifts in dominant plant species; it can reduce the abundance of certain species while increasing other species. Therefore, shifts in species composition due to grazing can influence the hydrophytic vegetation determination.

The *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Regional Supplement) (USACE 2008b) provides guidance in cases where the hydrophytic vegetation determination may be unreliable or misleading due to the effects of grazing. The Regional Supplement recommends examination of the vegetation on a nearby, ungrazed reference site having similar soils and hydrologic conditions, and if soils and hydrology are comparable, assume that the same plant community would exist on the grazed site in the absence of grazing.

The seven isolated wetlands discussed at the beginning of this section were located approximately 1.7 miles to the west, on the north side of CR-22. These wetlands occur in fields actively managed for grain production. The wetlands are not regularly tilled or disturbed due to their low topographic position and detention of water. Grazing does not occur. Soil and hydrologic conditions in these ungrazed areas are similar to the conditions in the cattle grazing areas where the 12 additional closed depressions are located. Therefore, since hydrophytic vegetation was dominant in the closed depressions in the ungrazed areas, we assume that it would be dominant in the grazed areas. Thus, these depressions were determined to be wetlands.

These depressional seasonal wetlands are isolated and do not connect to, and are not adjacent to, other potentially jurisdictional waters. The nearest potential jurisdictional water is the White River which is approximately 1.75 miles to the southwest.

4.4 Other Observations

Freshwater ponds were mapped in the NWI in two locations east of CR-J35 and north of Avenue 24, and these were also investigated. One area located on the southwest corner of the pasture, mapped as a freshwater pond (PUBF), did not contain indicators of wetland conditions. Historic aerial imagery dating back to 1994 (Google Earth 2019) does not indicate a pond feature at this location. No drainages or indicators of flow into or out of the area were observed (Appendix B, Photograph 13). Another area north of Avenue 24 and west of Road 224 was mapped in the NWI as an excavated freshwater pond (PUSCx), but no pond was present. The area consisted of a defunct agricultural basin. Non-native upland plant species were dominant and numerous mammal burrows in the basin bottom indicated a lack of inundation (Appendix B, Photograph 14). These areas are not likely jurisdictional.

Aerial imagery indicated a potential depressional wetland south of Avenue 64 between Road 224 and SR-65. The area was investigated during the survey and was found to be recently disturbed by tilling activities (Appendix B, Photograph 15). From an elevated vantage point, soils in the lower elevation area appeared to differ from the surrounding area. Due to potential inundation observed in aerial photos indicating potential wetland hydrology, a wetland determination data sheet was completed (Appendix C, Wetland Determination Form SP-2). The area contained problematic vegetation due to managed plant communities (USACE 2008) but lacked hydric soils. Therefore, the area was determined to not be a wetland.

5 Summary of Jurisdictional Waters

Table 1 summarizes the various potentially jurisdictional features delineated in the Project Area. Note that linear feet measurements are not provided for the wetlands, since they are asymmetrical features and not linear features.

Table 1 Potential USACE, RWQCB and CDFW Jurisdiction in the Project Area

	Potential USACE/ RWQCB CWA Jurisdiction		Potential RWQCB Jurisdiction	Potential CDFW Jurisdiction
Feature	Non-wetland Waters (acres/linear feet)	Wetland Waters (acres/linear feet)	Isolated Waters of the State (acres/linear feet)	Streambed (acres/linear feet)
White River	–/–	–/–	2.69/975	2.69/975
Ephemeral Drainage 1	–/–	–/–	0.01/230	0.01/230
Ephemeral Drainage 2	–/–	–/–	0.04/345	0.04/345
Irrigation Ditch	–/–	–/–	0.03/269	–/–
Isolated Wetland 1	–/–	–/–	0.05/–	–/–
Isolated Wetland 2	–/–	–/–	0.02/–	–/–
Isolated Wetland 3	–/–	–/–	0.06/–	–/–
Isolated Wetland 4	–/–	–/–	0.05/–	–/–
Isolated Wetland 5	–/–	–/–	0.05/–	–/–
Isolated Wetland 6	–/–	–/–	0.03/–	–/–
Isolated Wetland 7	–/–	–/–	0.02/–	–/–
Isolated Wetland 8	–/–	–/–	0.01/–	–/–
Isolated Wetland 9	–/–	–/–	0.02/–	–/–
Isolated Wetland 10	–/–	–/–	0.07/–	–/–
Isolated Wetland 11	–/–	–/–	0.03/–	–/–
Isolated Wetland 12	–/–	–/–	0.03/–	–/–
Isolated Wetland 13	–/–	–/–	0.04/–	–/–
Isolated Wetland 14	–/–	–/–	0.13/–	–/–
Isolated Wetland 15	–/–	–/–	0.05/–	–/–
Isolated Wetland 16	–/–	–/–	0.08/–	–/–
Isolated Wetland 17	–/–	–/–	0.05/–	–/–
Isolated Wetland 18	–/–	–/–	0.01/–	–/–
Isolated Wetland 19	–/–	–/–	0.03/–	–/–

Feature	Potential USACE/ RWQCB CWA Jurisdiction		Potential RWQCB Jurisdiction	Potential CDFW Jurisdiction
	Non-wetland Waters (acres/linear feet)	Wetland Waters (acres/linear feet)	Isolated Waters of the State (acres/linear feet)	Streambed (acres/linear feet)
Total	**–/–**	**–/–**	**3.55 acres / 1,550 lin feet**	**2.74 acres / 1,550 lin feet**

5.1 Potential USACE Jurisdiction

The White River, ephemeral drainages, and irrigation ditch are non-navigable features. The drainages and ditch convey hydrologic flows during high precipitation events, and convey road and irrigation runoff from adjacent active agriculture fields sporadically through the year. The White River appears to be intermittent. None of these features are tributary to downstream waters of the U.S. The drainages terminate in farm fields and the ditch drains to Isolated Wetland 5. The river terminates into a closed basin within agriculture fields approximately 17 miles west of the Project Area. They do not support interstate or foreign commerce or cross state lines.

Although wetlands delineated within the Project Area meet the definition of USACE wetlands, they are isolated features located outside the 100-year floodplain of any waters of the U.S and greater than 4,000 feet from the OHWM of the nearest waters of the U.S. Therefore, they also do not qualify as “adjacent wetlands” which may be regulated by the USACE. Since they are not adjacent wetlands, the USACE is not expected to claim jurisdiction over these isolated wetland features.

Under current regulations (2015 Clean Water Rule, 33 CFR Part 328), USACE is not expected to assert jurisdiction over any features in the Project Area, including the White River, ephemeral drainages, ditch, or isolated wetlands. When the Clean Water Rule is repealed, these features would still likely not be regulated by the USACE when the regulations and regulatory guidance revert back to pre-2015, since the drainages are not navigable and do not have a significant nexus with traditionally navigable waters. Similarly, the wetlands are not adjacent to waters with a significant nexus with traditionally navigable waters. The repeal would also mean that the wetlands, even if they are determined to be vernal pools, would not be regulated by USACE.

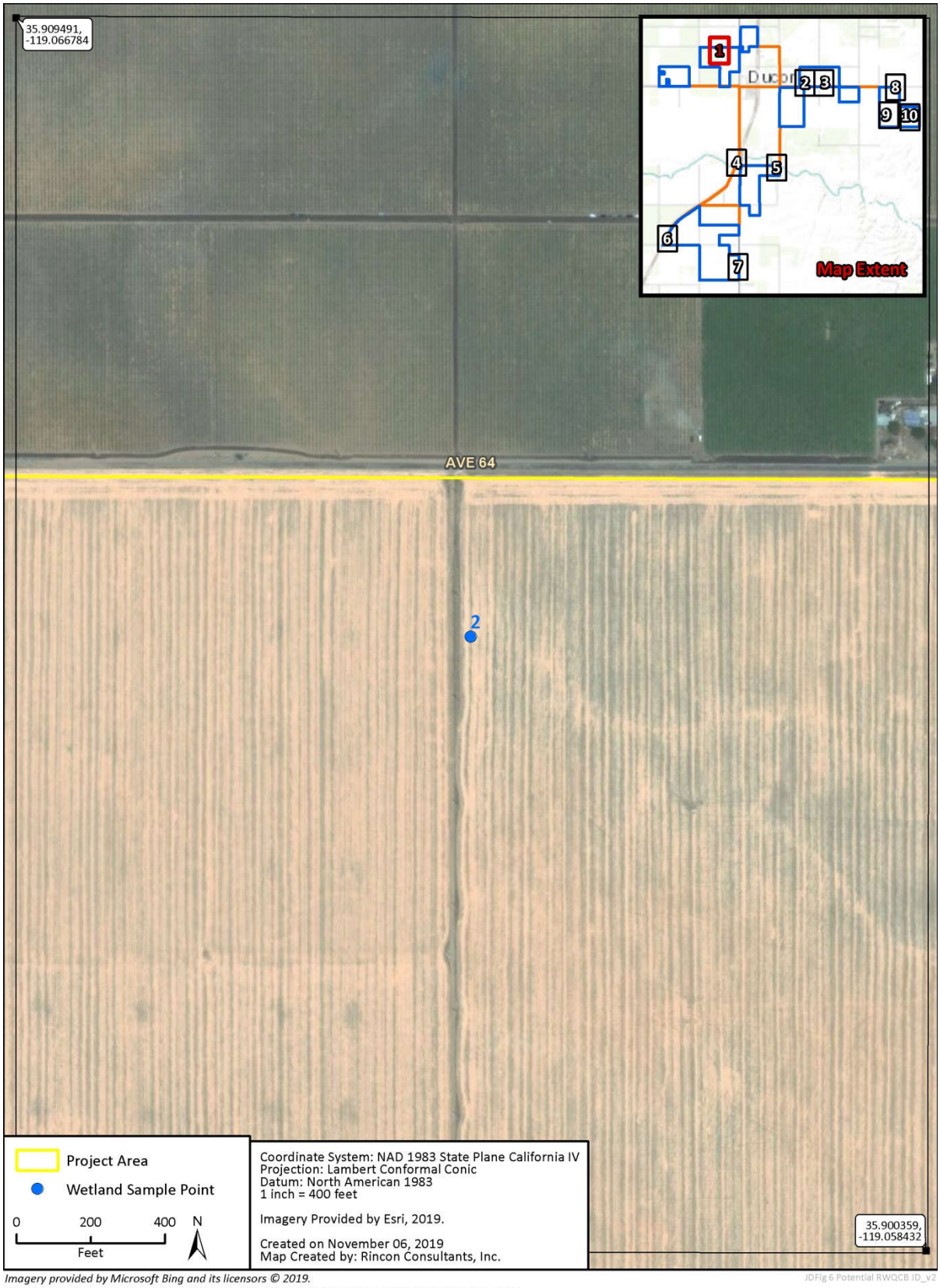
5.2 Potential RWQCB Jurisdiction

Since the USACE would not have CWA Section 404 regulatory authority over the delineated features in the Project Area, the RWQCB would not have regulatory authority pursuant to CWA Section 401. However, drainage features including the river, ephemeral drainages, and ditch which display an OHWM are expected to be considered jurisdictional waters of the State, pursuant to the Porter-Cologne Act. Additionally, the isolated depressional features meeting the USACE wetland definition are also likely to be considered jurisdictional waters of the State under the Porter-Cologne Act. As shown in Table 1 above, a total of approximately 3.55 acres (1,550 linear feet) of potential RWQCB jurisdiction are located within the Project Area. Delineated features potentially under RWQCB jurisdiction are displayed in Figures 5a through 5j below.

5.3 Potential CDFW Jurisdiction

Delineated drainages including the White River and the ephemeral drainages that contain evidence of a channel bed and banks or other OHWM indicators are likely subject to CDFW jurisdiction. Approximately 2.74 acres (1,550 linear feet) of potential CDFW jurisdictional areas were delineated in the Project Area using standard CDFW delineation practices. No riparian habitat was present. Delineated features potentially under CDFW jurisdiction are displayed in Figures 6a through 6d below.

Figure 5a Potential RWQCB Jurisdiction within the Project Area



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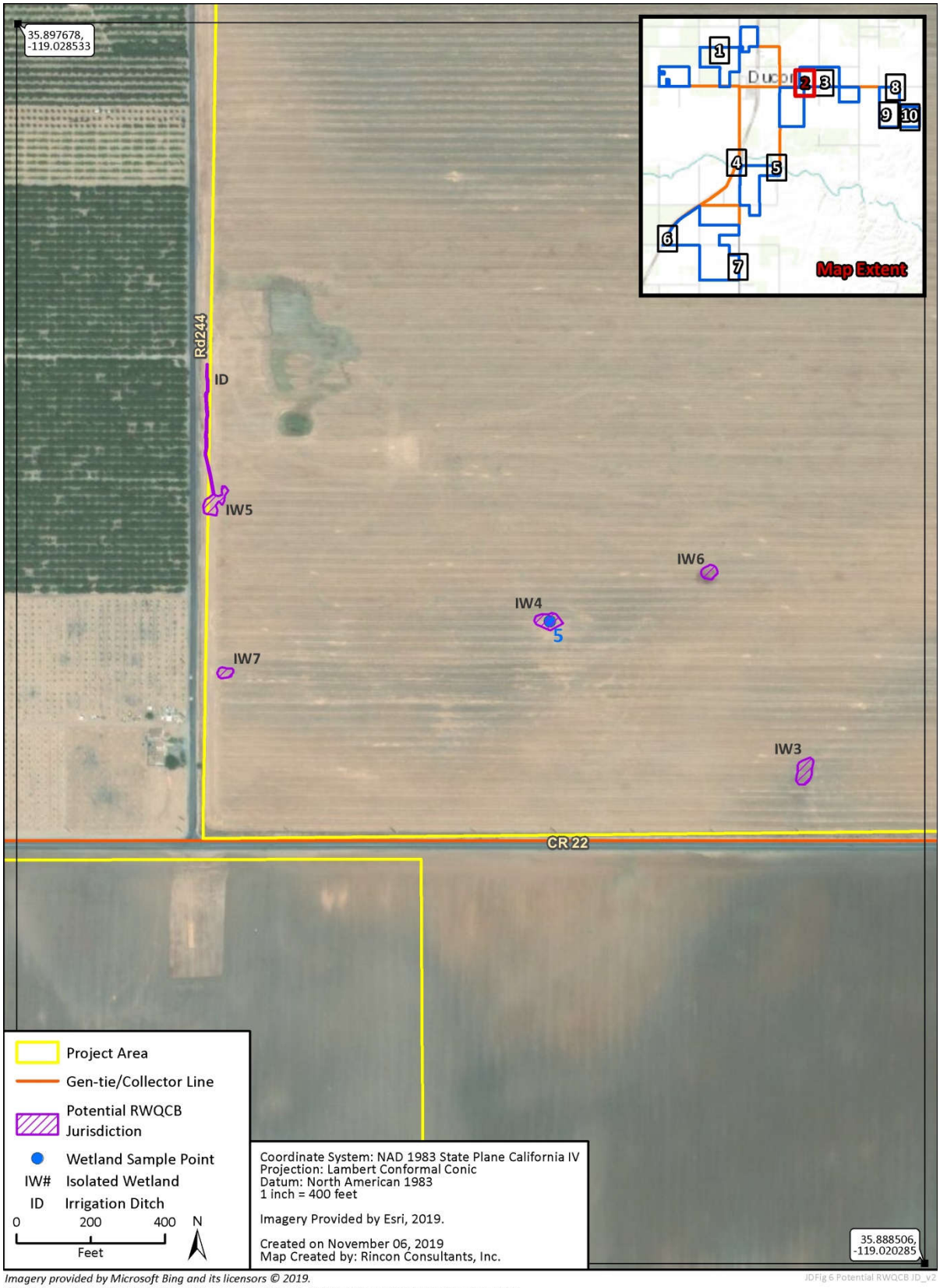
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5b Potential RWQCB Jurisdiction within the Project Area



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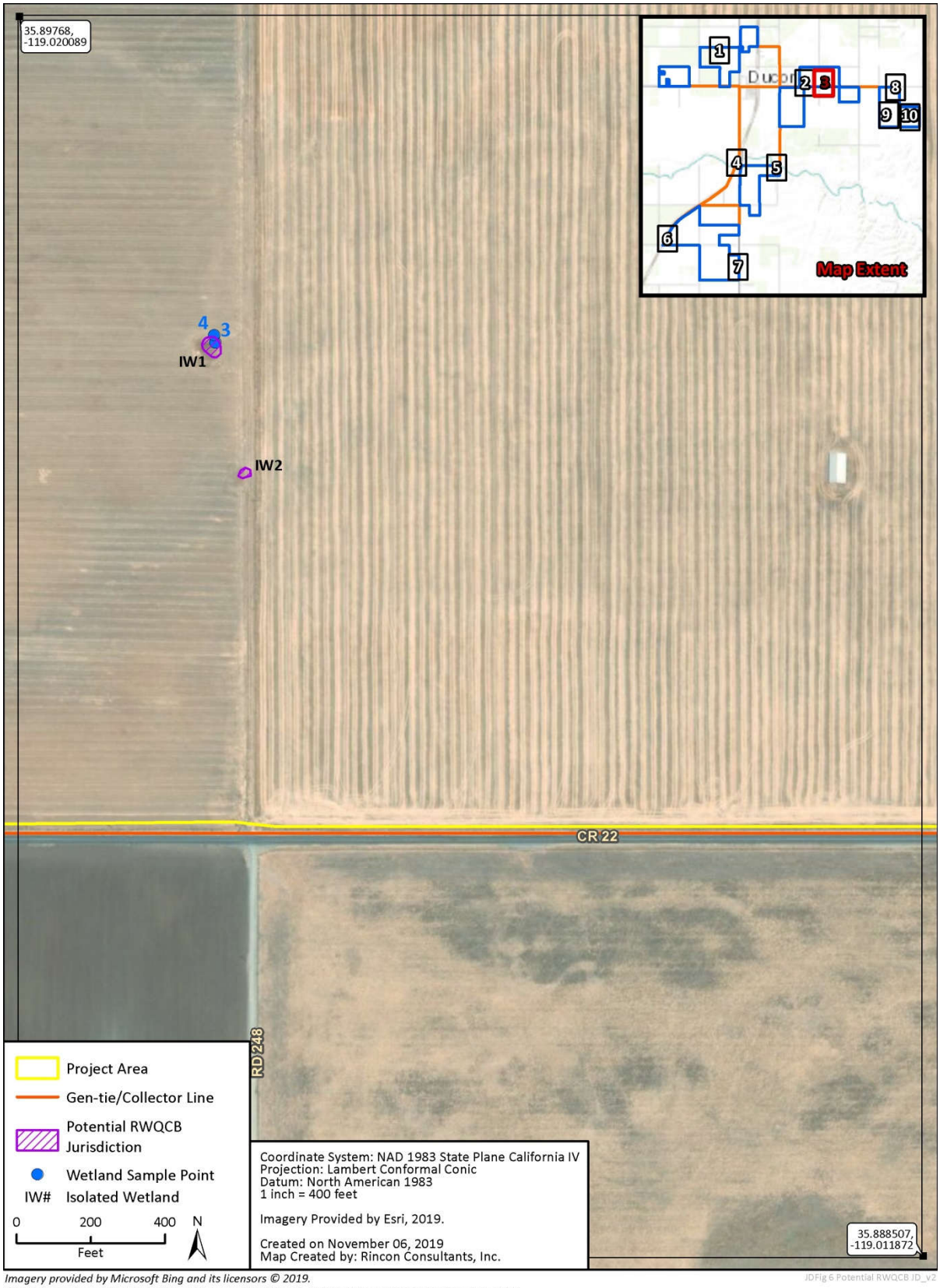
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5c Potential RWQCB Jurisdiction within the Project Area



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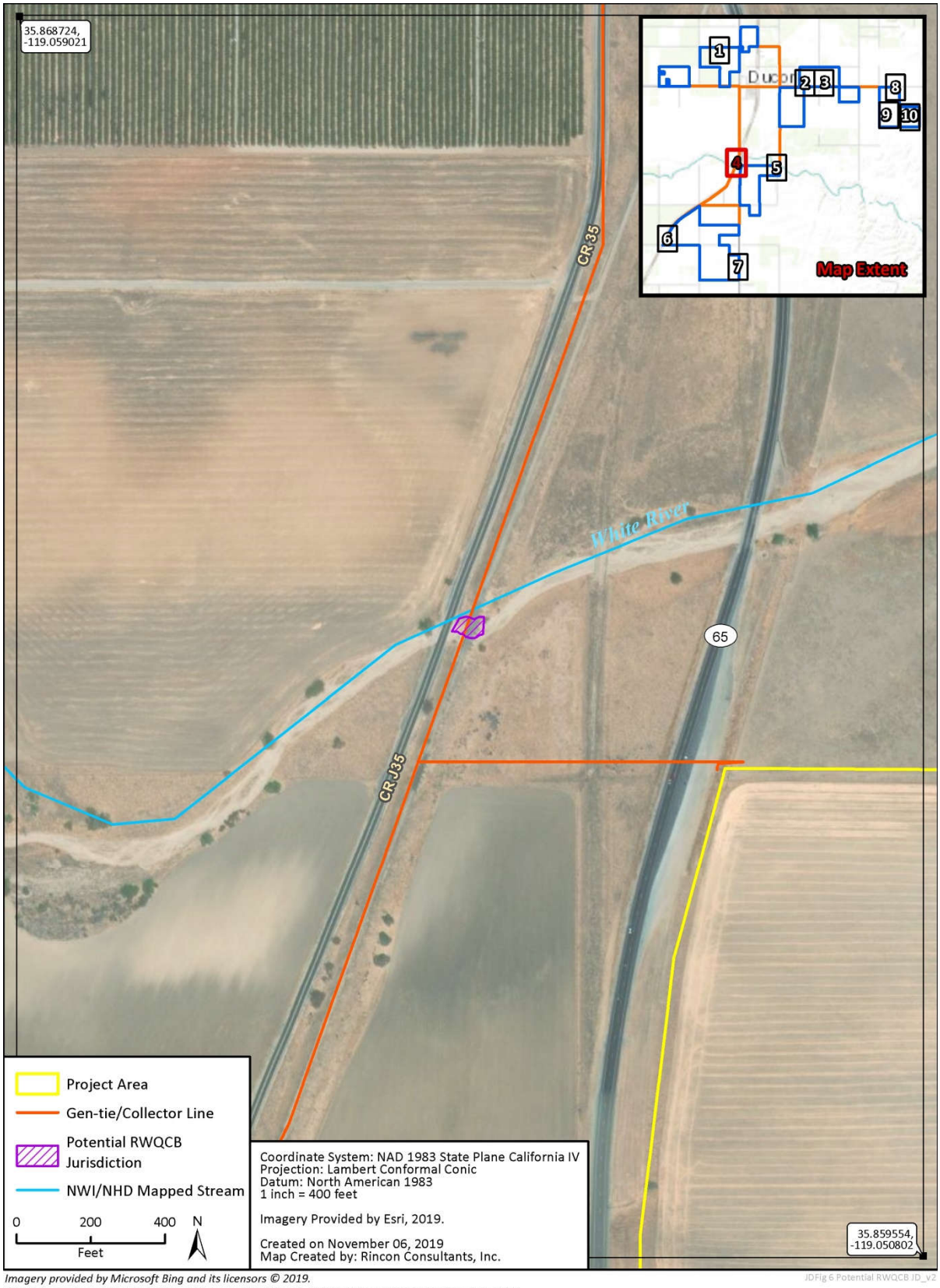
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5d Potential RWQCB Jurisdiction within the Project Area



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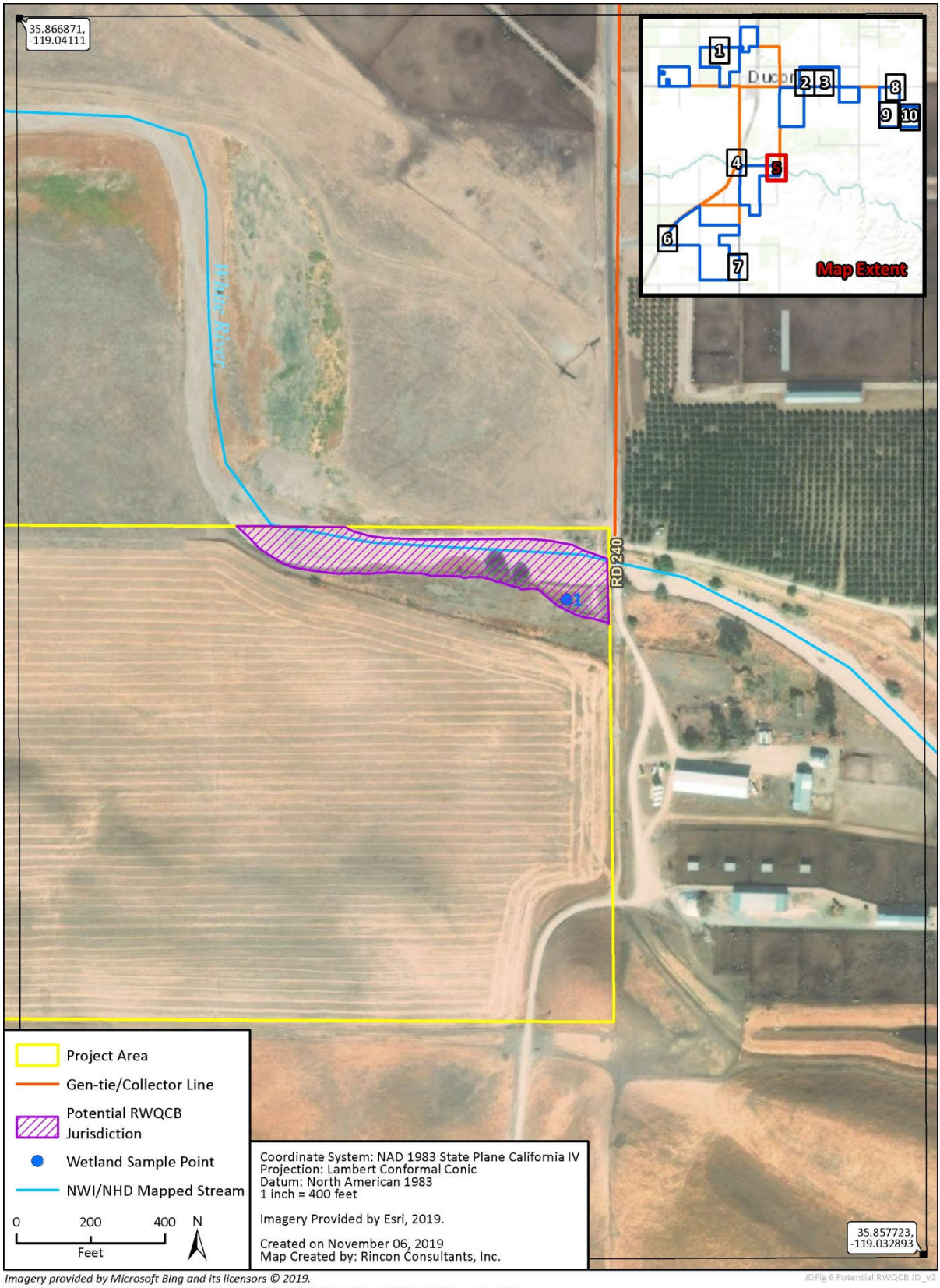
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5e Potential RWQCB Jurisdiction within the Project Area



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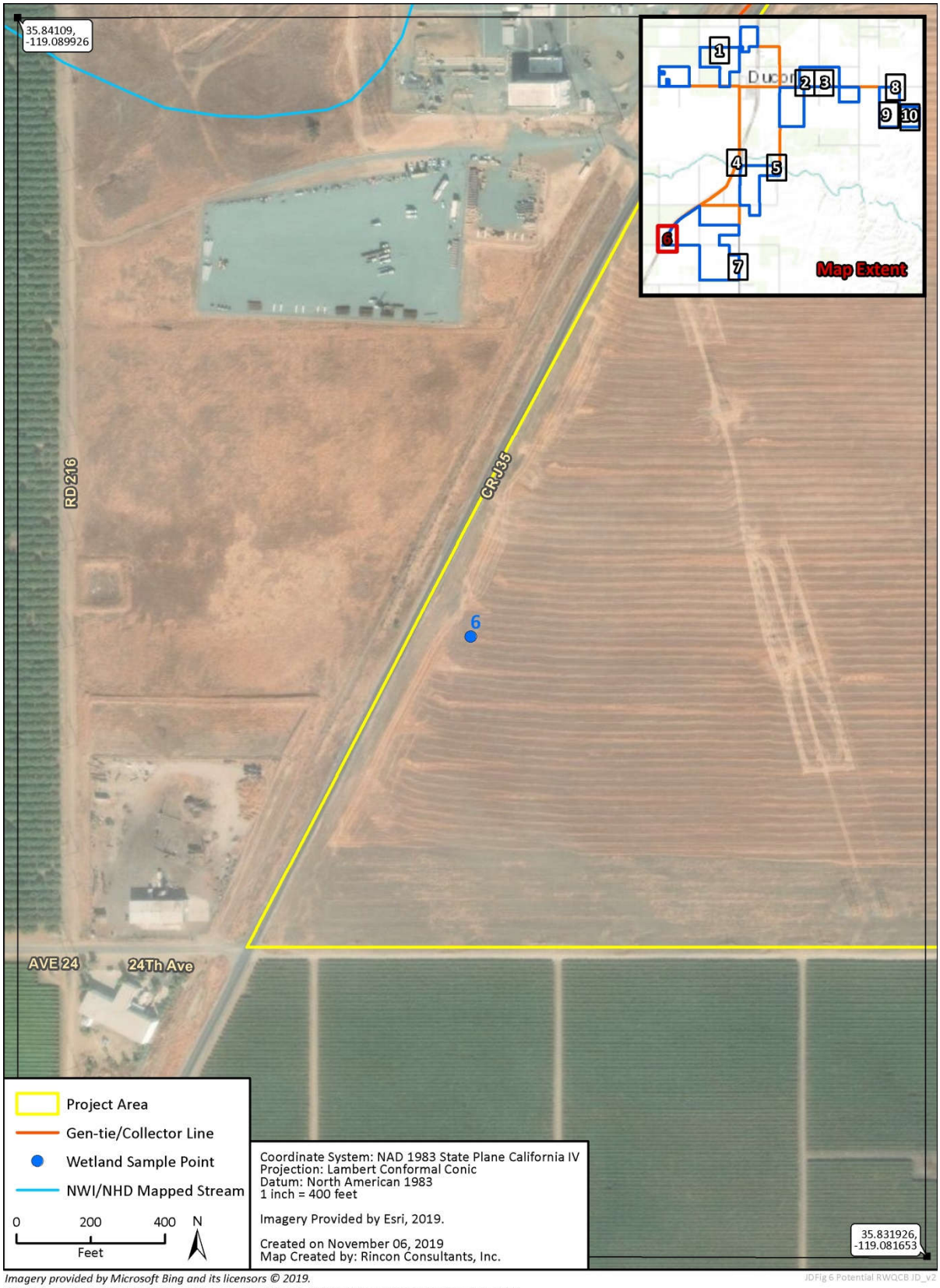
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5f Potential RWQCB Jurisdiction within the Project Area



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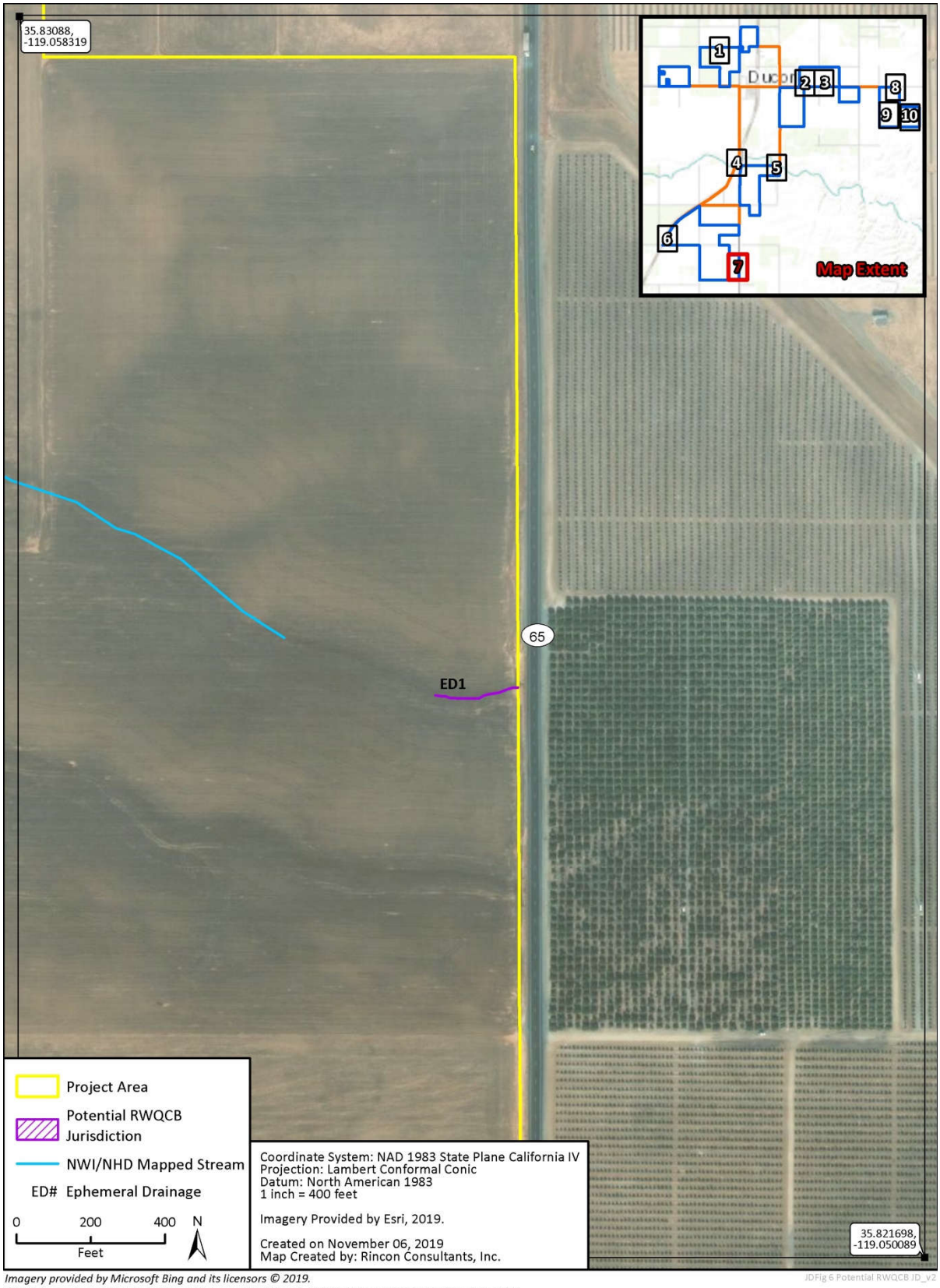
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5g Potential RWQCB Jurisdiction within the Project Area



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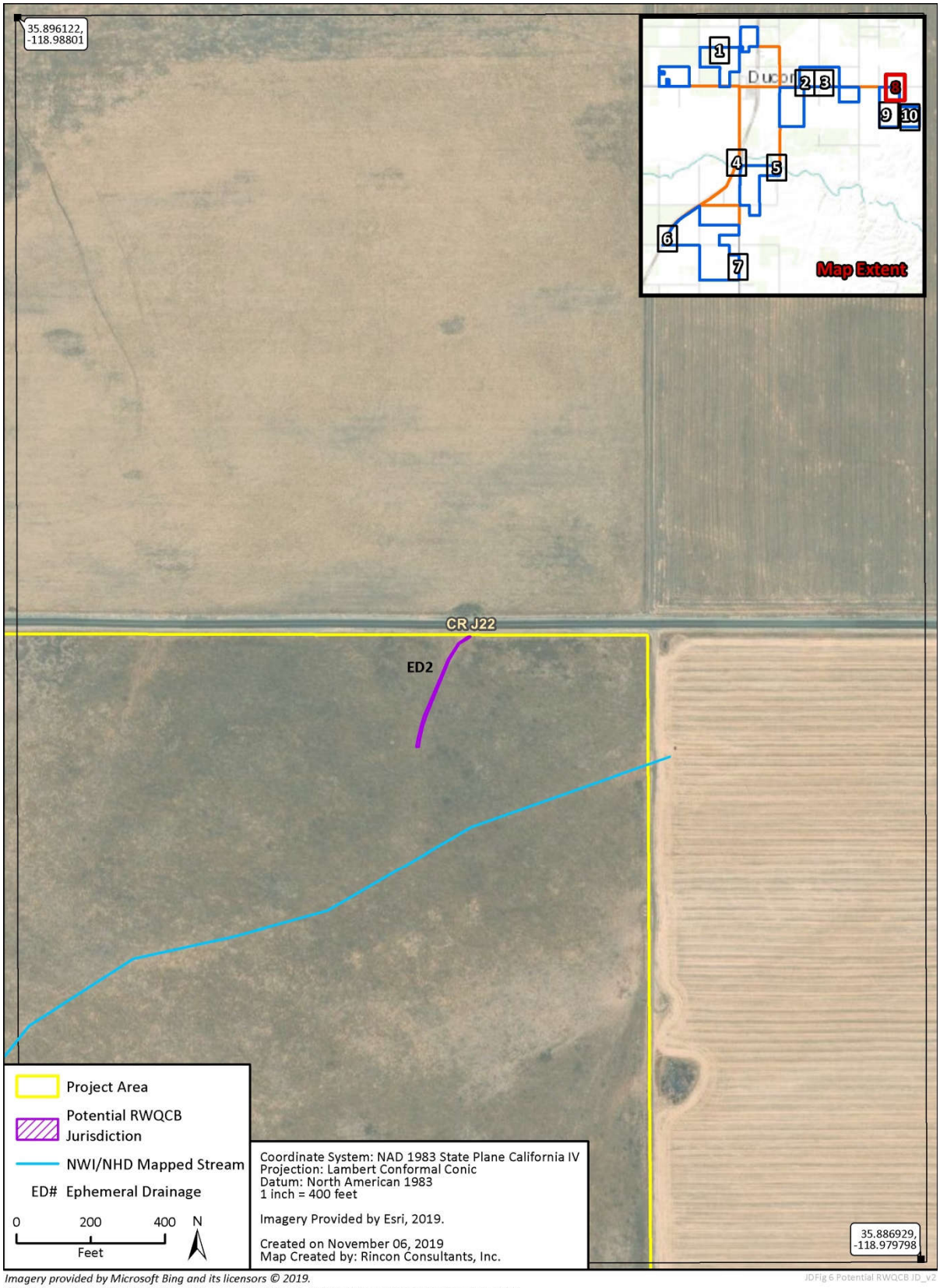
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5h Potential RWQCB Jurisdiction within the Project Area



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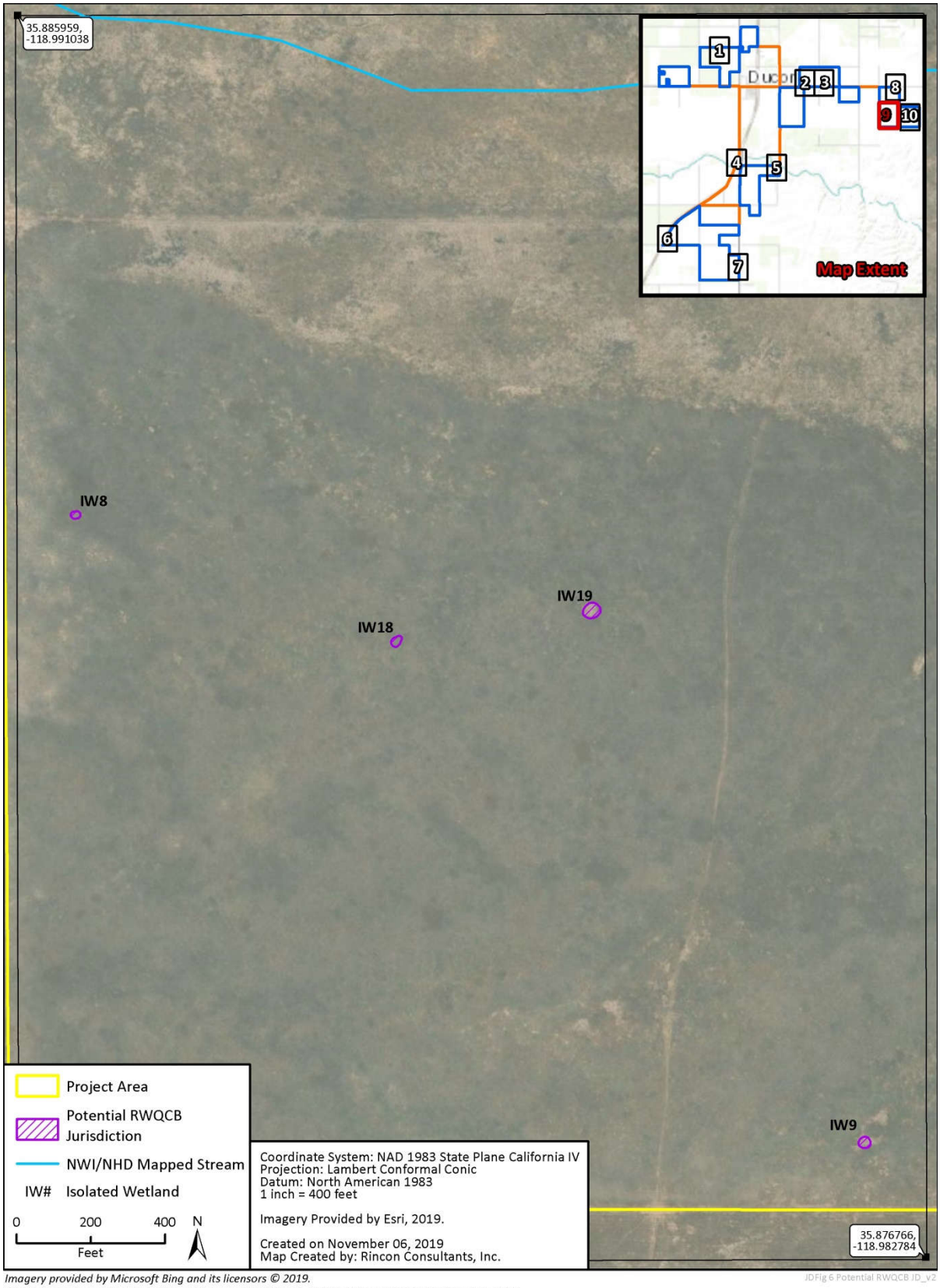
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5i Potential RWQCB Jurisdiction within the Project Area



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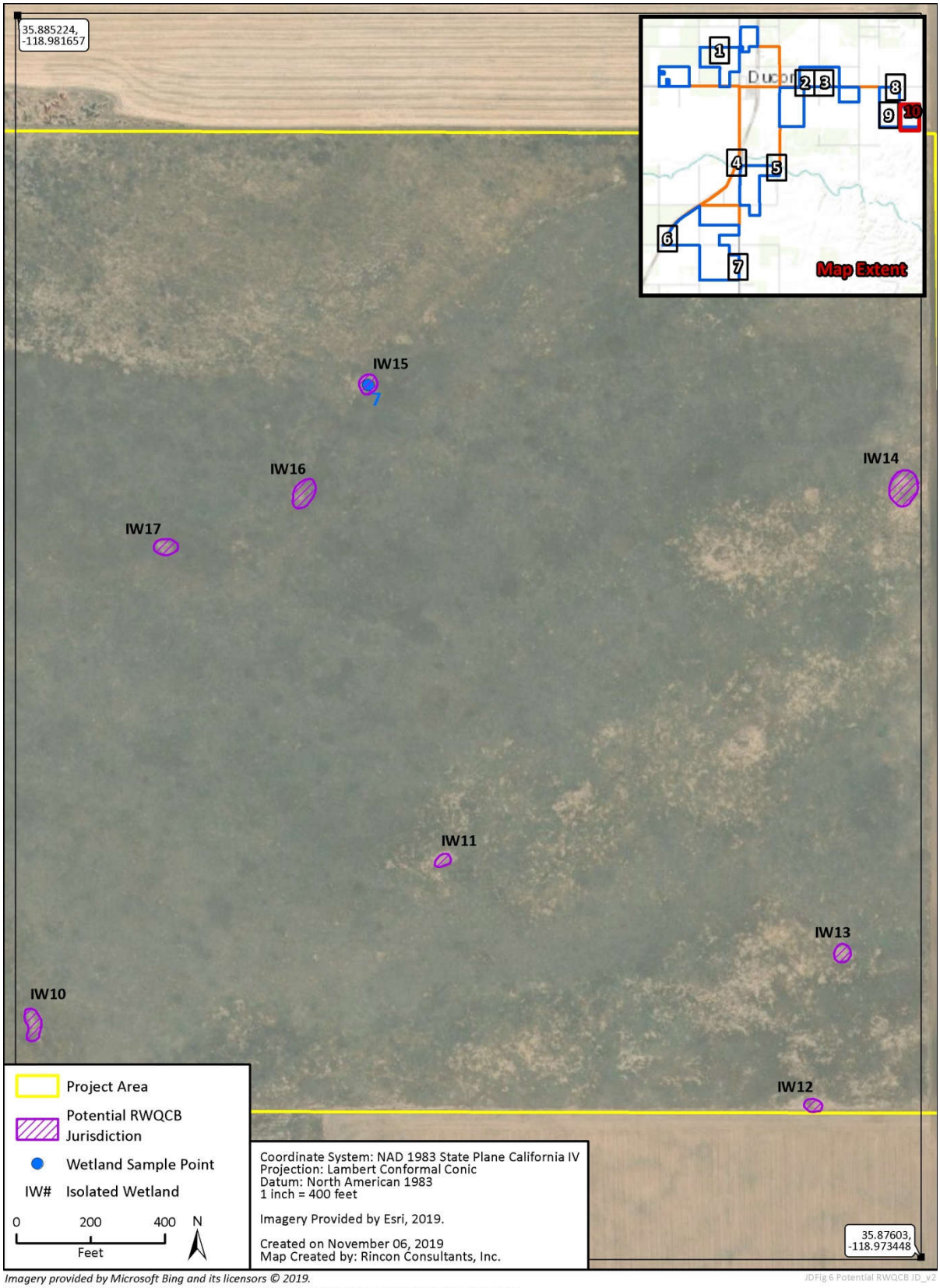
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 5j Potential RWQCB Jurisdiction within the Project Area



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Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 6a Potential CDFW Jurisdiction within the Project Area

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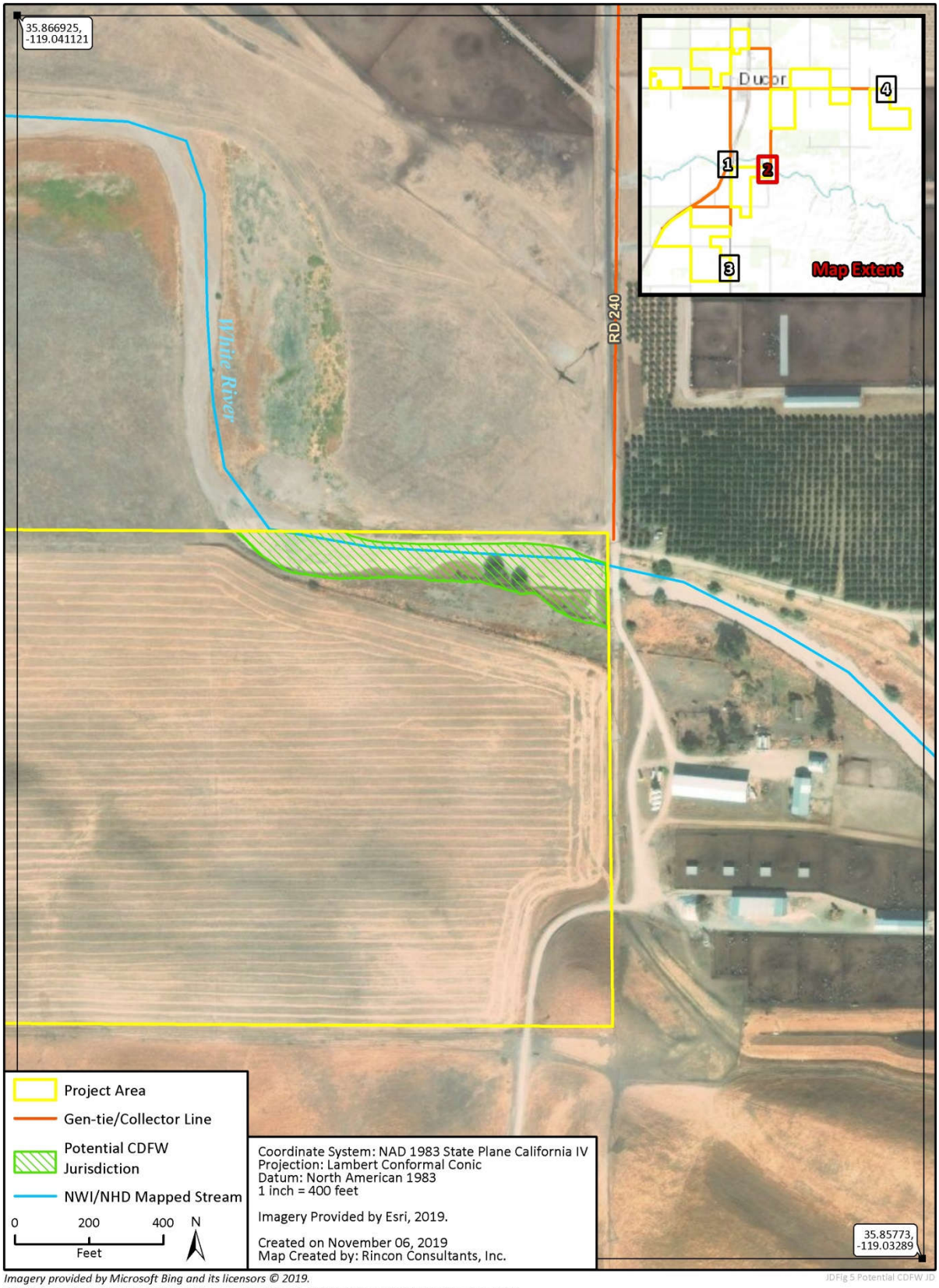
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 6b Potential CDFW Jurisdiction within the Project Area



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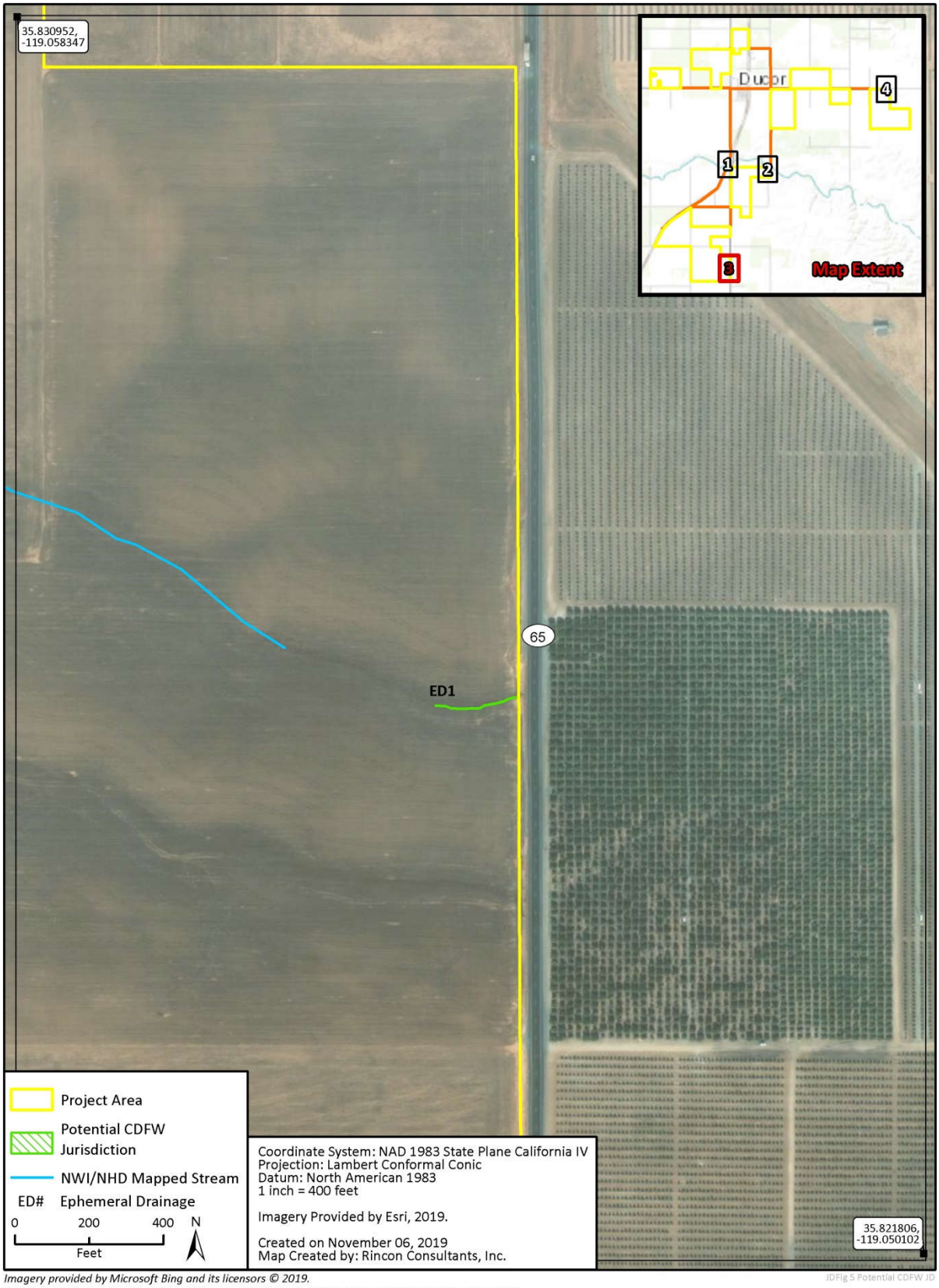
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 6c Potential CDFW Jurisdiction within the Project Area



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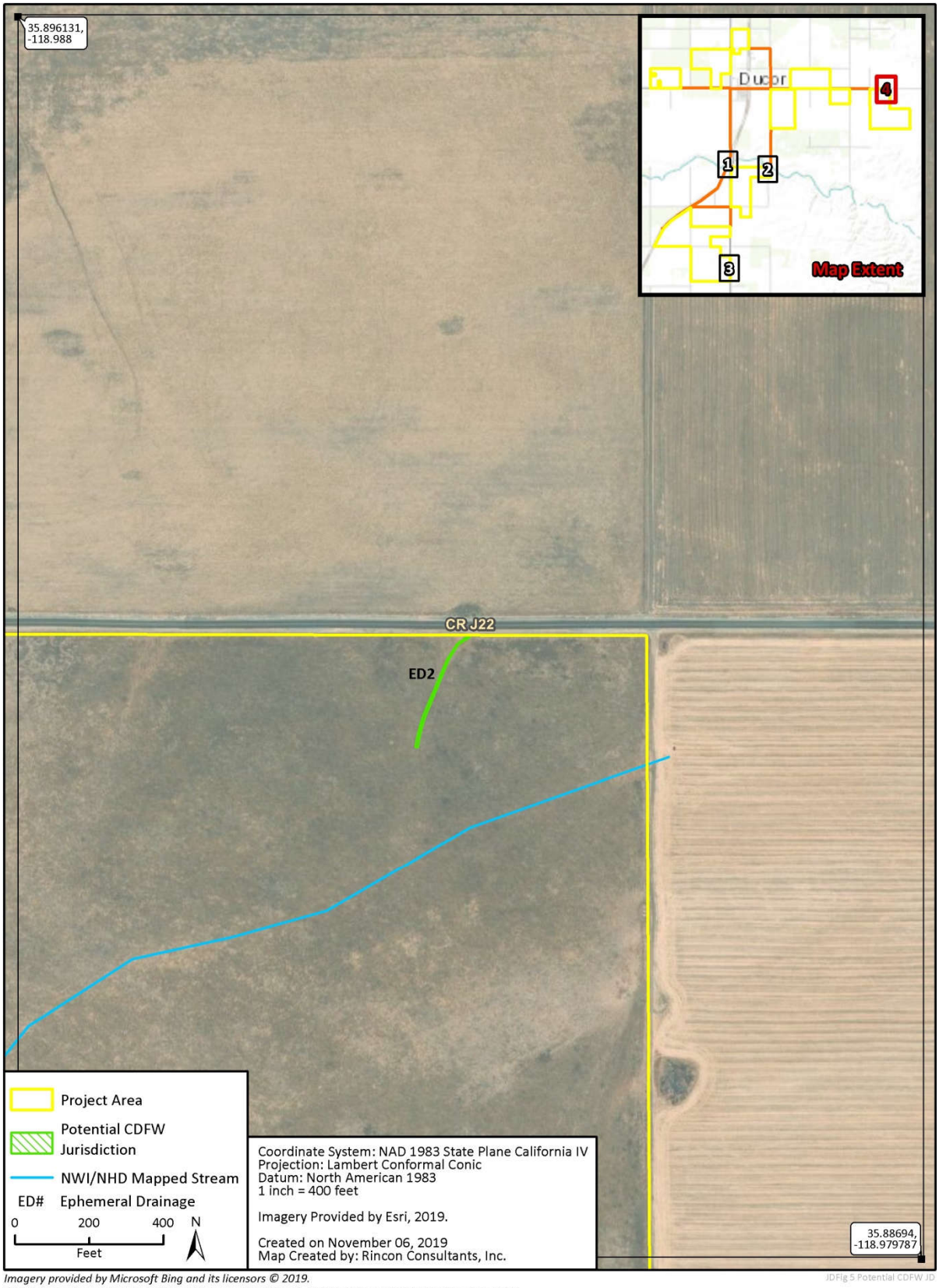
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Figure 6d Potential CDFW Jurisdiction within the Project Area



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Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

6 Conclusions and Recommendations

6.1 Conclusion

The White River, two ephemeral drainages, an irrigation ditch, and nineteen isolated wetlands were identified, delineated, and mapped within the Project Area. Potential RWQCB jurisdictional areas total 3.55 acres and potential CDFW jurisdictional areas total 2.74 acres within the Project Area. No riparian habitat in association with these features was present.

This assessment can assist the Applicant in siting facilities to minimize impacts to jurisdictional features. Where feasible, potential jurisdictional features should be considered and avoided during project design.

The USACE is not expected to have regulatory authority over the delineated features within the Project Area, and thus authorizations from the USACE or RWQCB under the CWA are not anticipated. However, delineated features are likely subject to regulation by the RWQCB under the Porter-Cologne Act.

Note that the State Water Resources Control Board (SWRCB) Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State will be in effect May 28, 2020, and RWQCB permit application submittal requirements will change at that time. However, the delineated boundaries of potential RWQCB jurisdiction in the Project Area are not expected to change.

Additionally, a CDFW Notification of Lake or Streambed Alteration, and subsequent execution of a Lake or Streambed Alteration Agreement pursuant to Sections 1600 et seq. of the CFGC, will likely be required for any proposed impacts to CDFW jurisdictional areas.

If impacts to potential jurisdictional areas are proposed, the agencies make the final determination on regulatory authority and jurisdictional boundaries at the time permits are requested.

6.2 Recommendations

Since the delineation field surveys were conducted outside the typical blooming periods for most potential vernal pool endemic plant species, it is recommended that surveys be conducted in the isolated wetlands during the appropriate periods to confirm their presence or absence. Vernal pools were not identified within the Project Area due to the absence of vernal pool endemic species.

At the time of this writing, should those species occur, potential jurisdiction of the isolated wetlands would be pursuant to USACE regulations [33 CFR Part 328.3 9(a)(7)(iv)] and a significant nexus evaluation would be required. After the Clean Water Rule is repealed, these isolated vernal pools would not be regulated by the USACE. However, note that one or more lawsuits may be filed to challenge the repeal of the rule, and USACE regulations may or may not change.

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Appendix A

Regulatory Overview and Definitions

RWQCB Jurisdiction

The State Water Resources Control Board (SWRCB) and local RWQCB have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The local RWQCB enforces actions under this general order, and is also responsible for Clean Water Act Section 401 certification determinations over USACE defined jurisdictional waters.

The Porter-Cologne Act provides the State with very broad authority to regulate "waters of the State" (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a "Report of Waste Discharge" (ROWD) when there is no federal nexus, such as under Section 401of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If isolated waters conditions are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methodology pursuant to the 1987 Wetlands Manual. The CDFW's jurisdiction is defined as the top of the bank to the top of the bank of the stream, channel, or basin or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, or lake or other impoundment, whichever is greater.

CDFW Jurisdiction

Section 1602 of CFGC requires an entity to notify the CDFW before conducting any activity that would divert obstruct, or substantially alter a streambed. Once notified, the CDFW may require that a Streambed Alteration Agreement be executed before the activity may proceed. The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. Considering this, four sources of information were reviewed and considered in determining the appropriate limits of CDFW jurisdiction within the site, as discussed below. The principles presented in these materials were used to guide the delineation of on-site streams, with consideration given to the relevance (i.e., jurisdiction, applicability) of each source to the project and resources at hand.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

The tenets listed above, among others, were applied within the Project Area in an attempt to determine the limits of on-site streams.

Wetlands

The USACE defines wetlands as containing three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USFWS published the National List of Plant Species That Occur In Wetlands (Lichvar, 2013), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Occur almost always (estimated probability >99%) under natural conditions in wetlands.
- **Facultative Wetland (FACW).** Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
- **Facultative (FAC).** Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
- **Facultative Upland (FACU).** Usually occur in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%).
- **Obligate Upland (UPL).** May occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the USFWS list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, or saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying, which indicates reducing conditions by a blue-grey color, or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

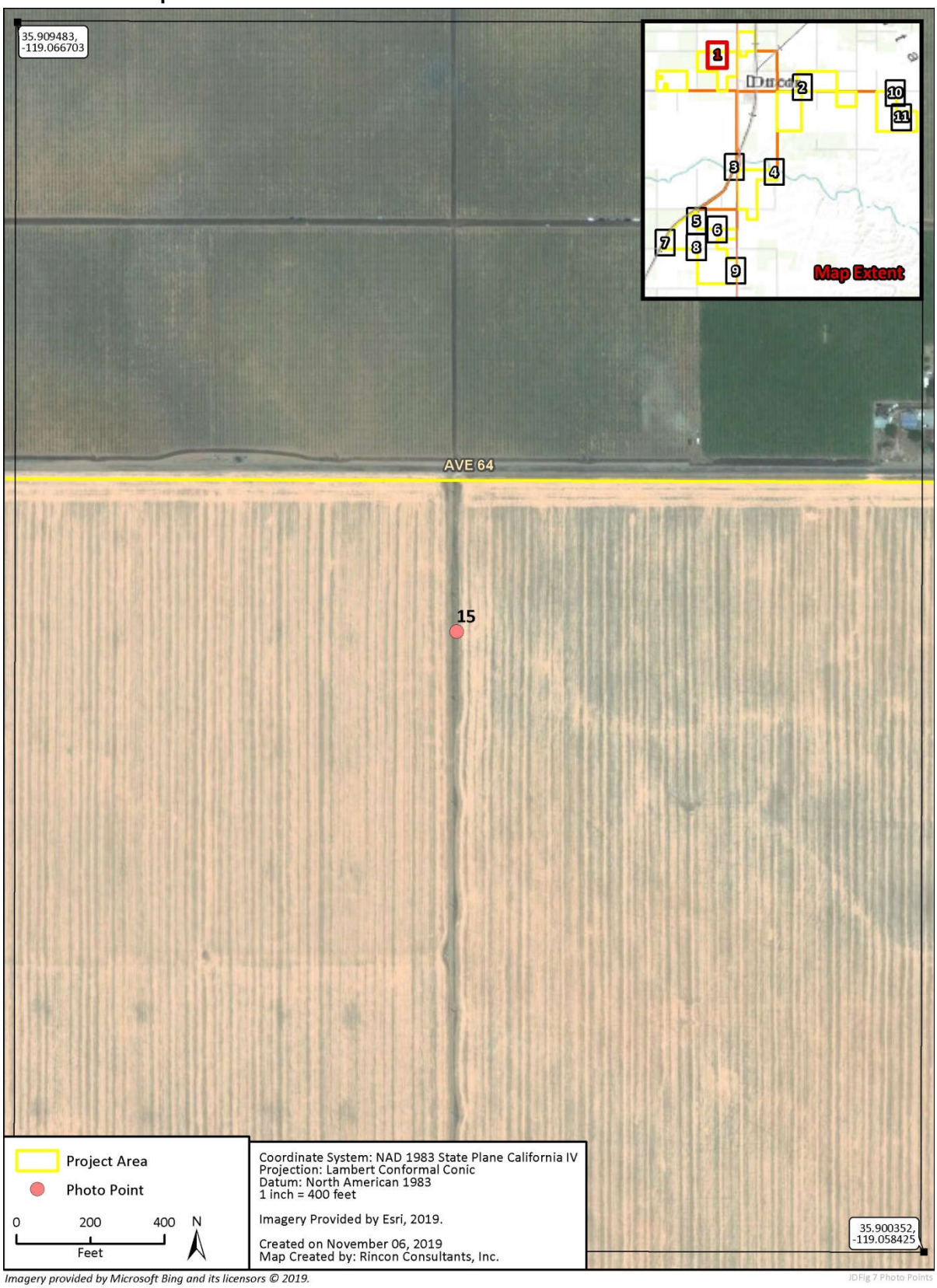
Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Appendix B

Representative Photographs

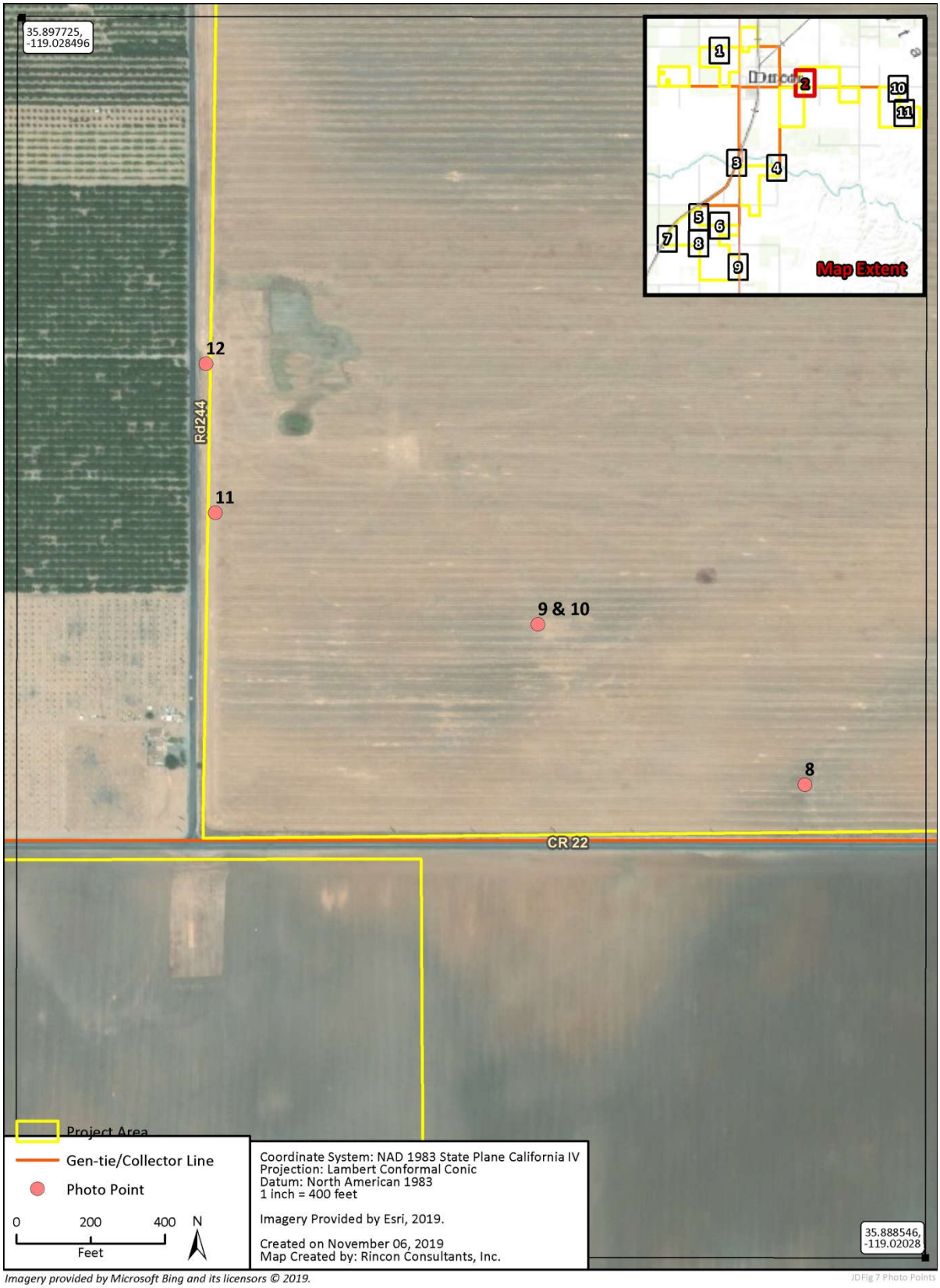
Photo Point Map 1



Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

JDFig 7 Photo Points

Photo Point Map 2



Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

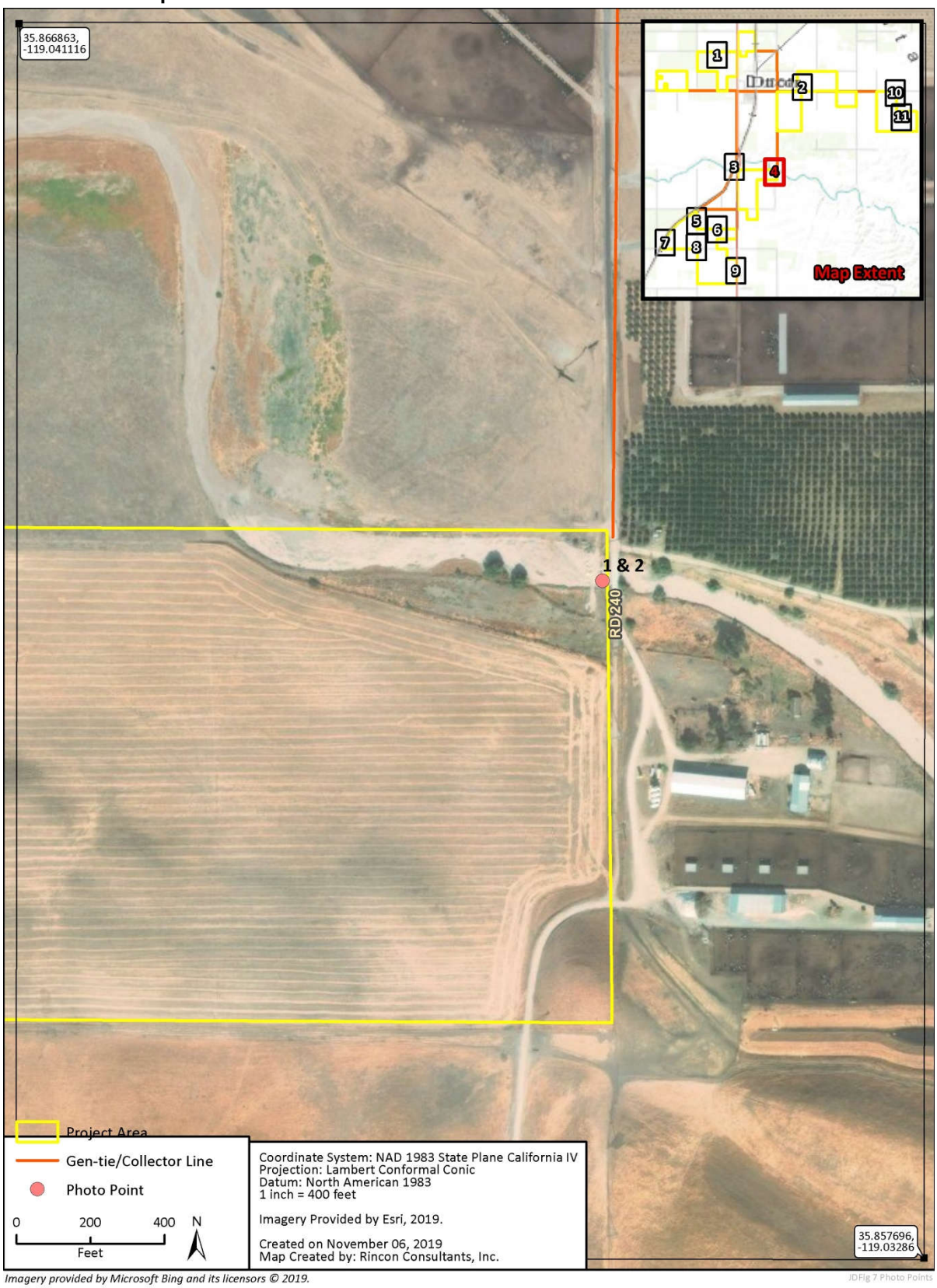
JDFig 7 Photo Points

Photo Point Map 3

Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

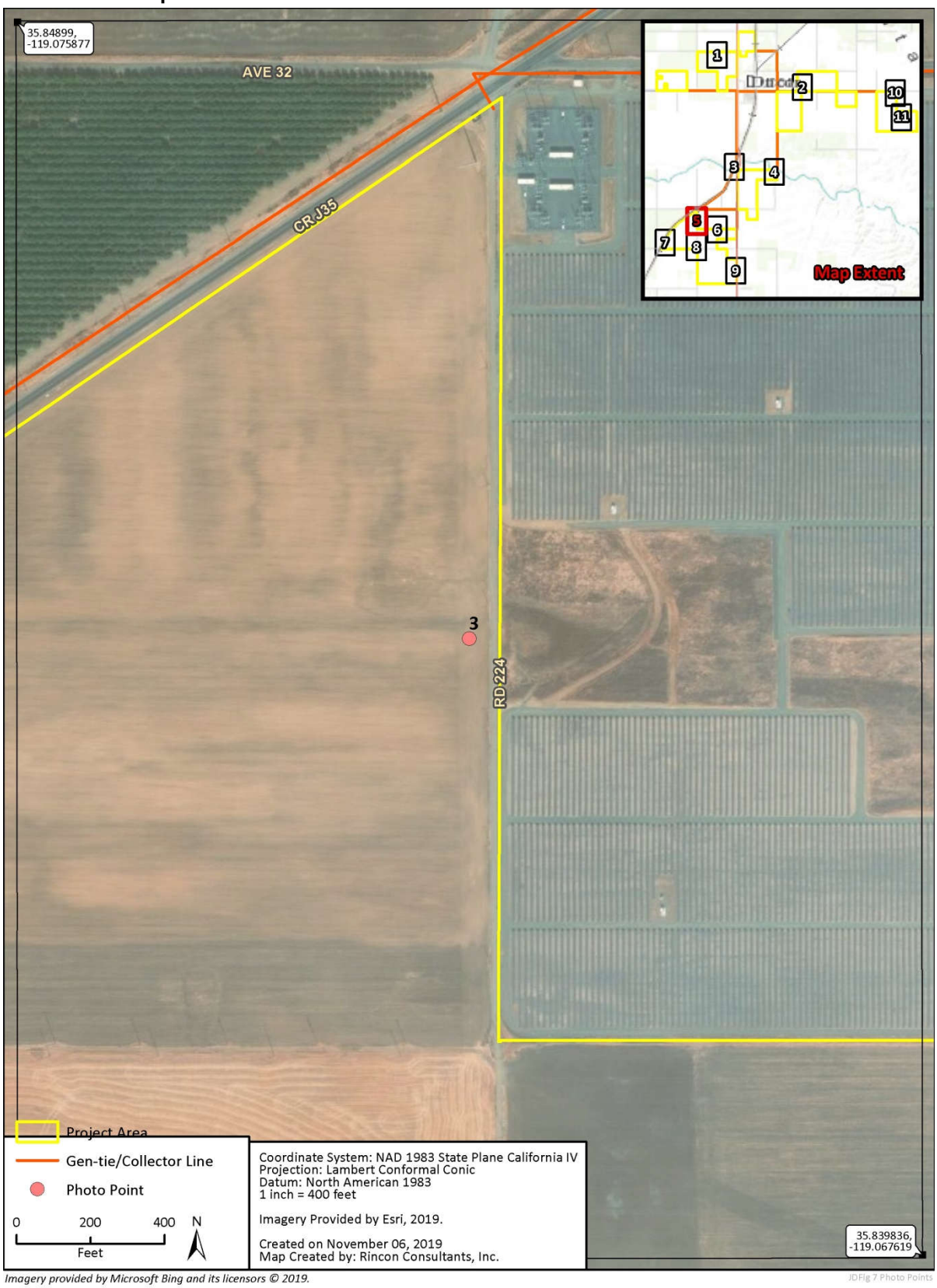
JDFig 7 Photo Points

Photo Point Map 4



Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Photo Point Map 5



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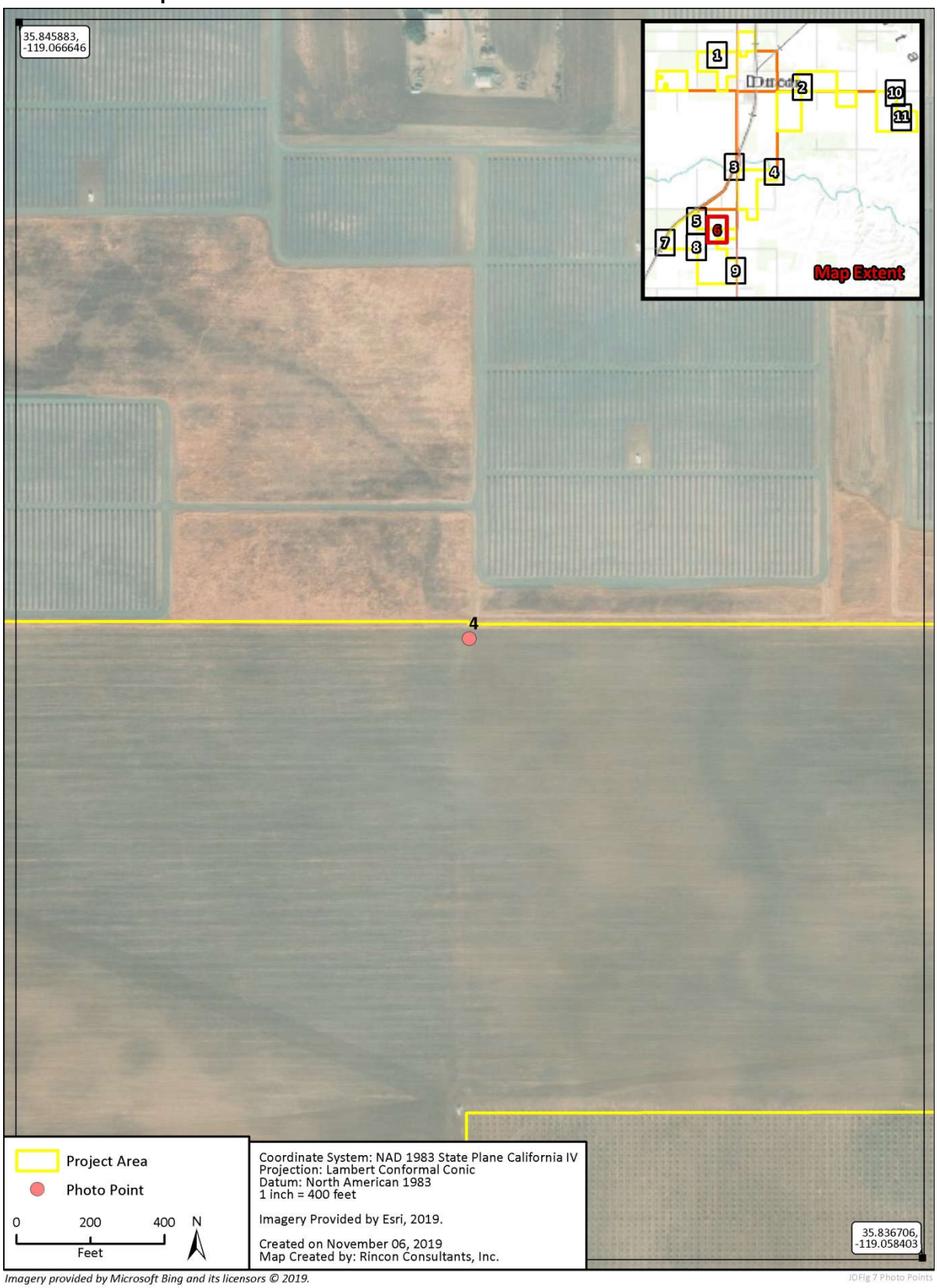
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

JDFig 7 Photo Points

Photo Point Map 6



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Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Photo Point Map 7

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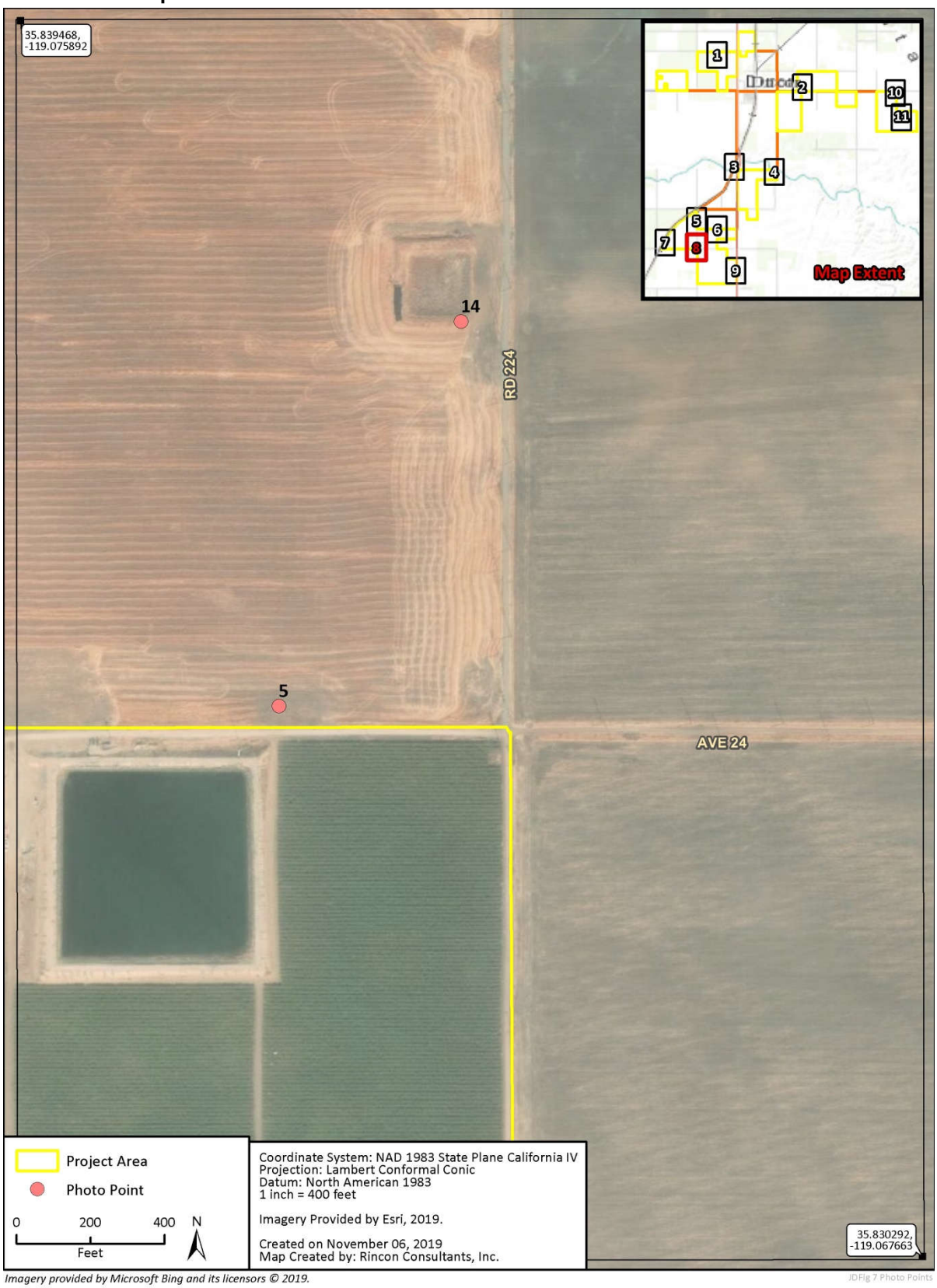
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

JDFig 7 Photo Points

Photo Point Map 8



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Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Photo Point Map 9

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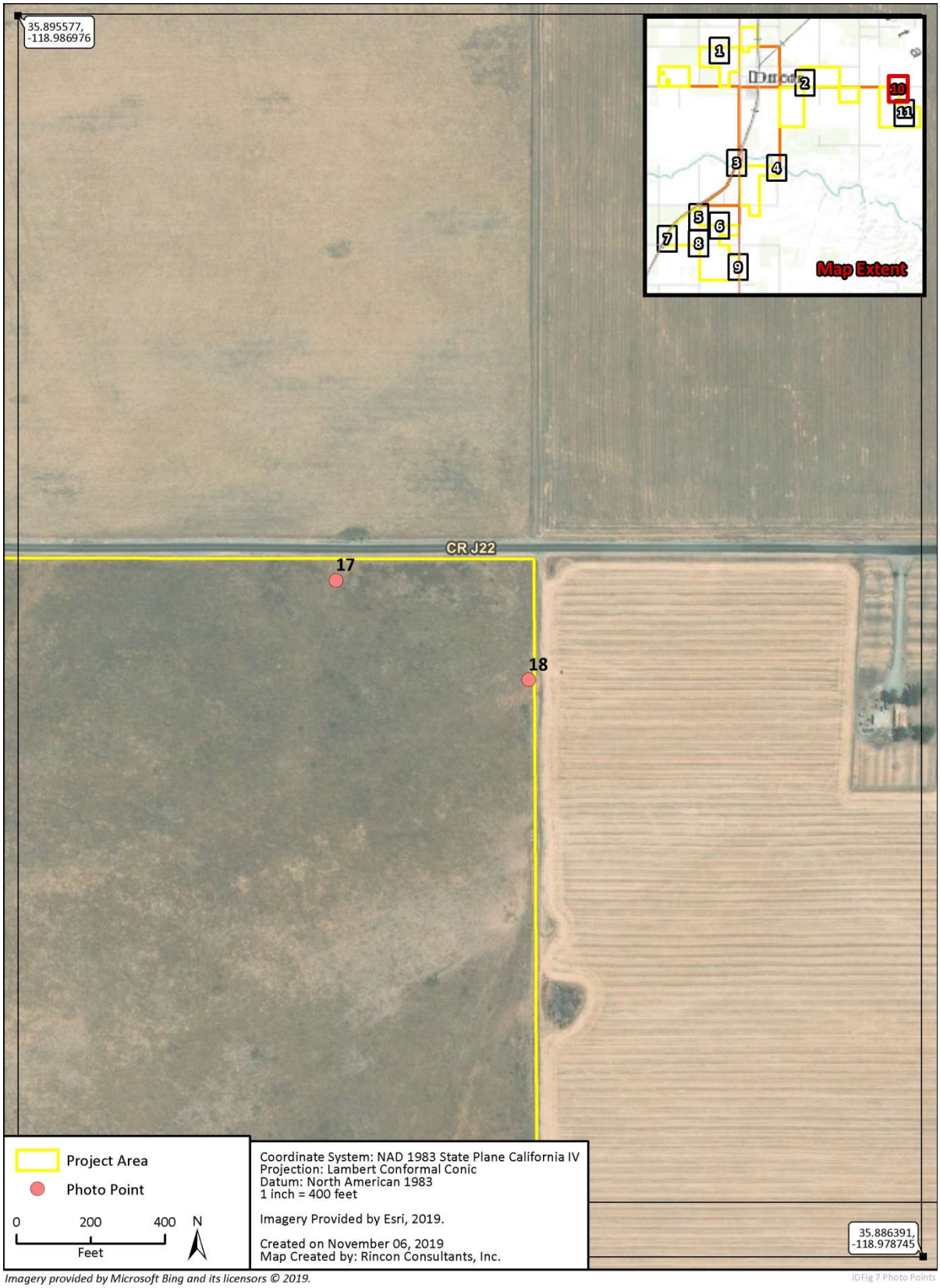
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

JDFig 7 Photo Points

Photo Point Map 10



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Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

Photo Point Map 11

Imagery provided by Microsoft Bing and its licensors © 2019.
Additional data provided by National Hydrography Dataset, 2018 & National Wetlands Inventory, 2017.

JDFig 7 Photo Points

Photograph 1. White River west of Road 240 with an OHWM defined by a change in vegetation cover. Two isolated willow trees are visible. They do not constitute riparian habitat but were included in the delineation of both RWQCB and CDFW potential jurisdiction since they are within the banks.

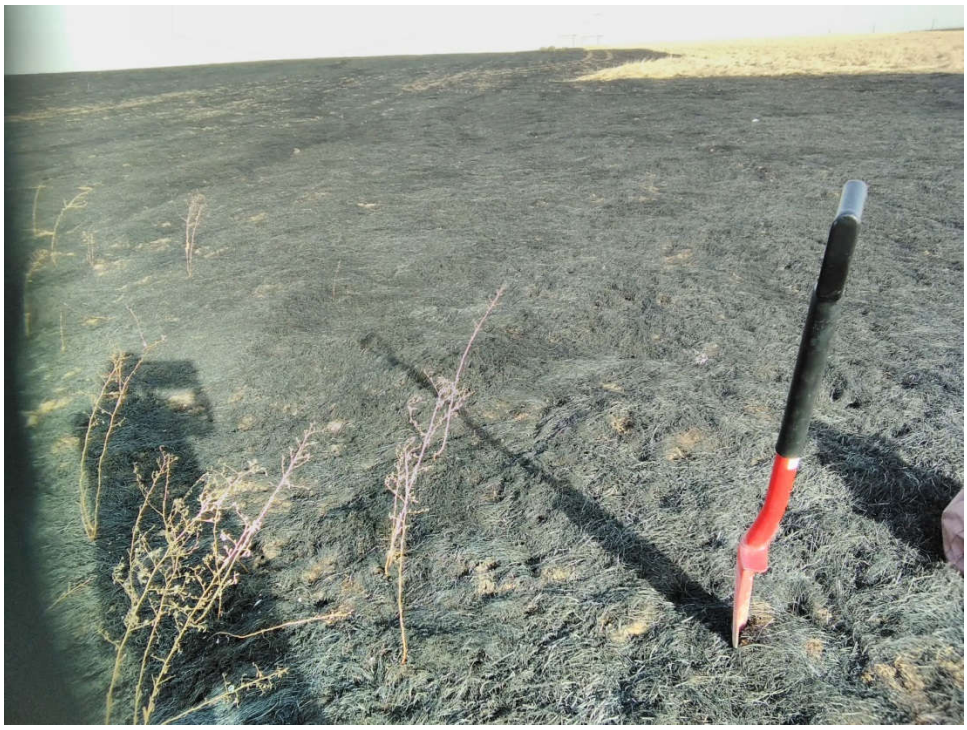
Photograph 2. White River crossing under Road 240. Photograph taken facing east.

Photograph 3. Area mapped in the NWI as a riverine, intermittently flooded streambed. No indicators of channel bed, bank, or OHWM were present. Photograph taken facing west, west of Road 224 and north of Avenue 24.

Photograph 4. Area mapped in the NWI as a riverine, intermittently flooded streambed. No indicators of channel bed, bank, or OHWM were present. Photograph taken facing east, west of SR-65 and north of Avenue 24.

Photograph 5. Area mapped in the NWI as a riverine, intermittently flooded streambed. No indicators of channel bed, bank, or OHWM were observed during surveys. Photograph taken facing north, north of Avenue 24 and west of Road 224.

Photograph 6. Delineated ephemeral drainage entering the parcel west of SR-65 and north of Avenue 16. It contains an OHWM but dissipates and terminates in the level farm field in the background. Photograph taken facing west.



Photograph 7. Area mapped in the NWI as a freshwater emergent wetland. This area had recently burned east of CR-J35 and north of Avenue 24. Wetland data was collected (Sampling Point 6) and no indicators of a wetland were present. Photograph taken facing south.

Photograph 8. Isolated Wetland 3 located north of CR-22 and east of Road 244. Photograph taken facing north.

Photograph 9. Isolated Wetland 4 located north of CR-22 and east of Road 244. Photograph taken facing northeast.

Photograph 10. Isolated Wetland 4 located north of CR-22 and east of Road 244 showing deep surface soil cracks (primary indicator of wetland hydrology).

Photograph 11. Isolated Wetland 5 located north of CR-22 and adjacent to Road 244. The irrigation ditch flows into the depression. Photograph taken facing northeast.

Photograph 12. Irrigation ditch adjacent to Road 244, north of CR-22. It connects to an Isolated Wetland 5. Photograph taken facing south.

Photograph 13. Area mapped in the NWI as a freshwater pond. This area was recently burned east of CR-J35 and north of Avenue 24. No pond or other wetland habitat was present. It is an upland location in a farm field. Photograph taken facing south.

Photograph 14. This area was mapped as an excavated freshwater pond in the NWI. It was a defunct basin fully vegetated with upland species, with no indicators of wetland hydrology or hydric soils. Photograph taken facing northwest, north of Avenue 24 and west of Road 224.

Photograph 15. Historic aerial imagery indicated potential ponding in this area, west of Road 232 and south of Avenue 64. However, no wetland indicators were present. Photograph taken facing east.

Photograph 16. White River crossing the proposed collector line along CR-J35. Photograph taken facing east.

Photograph 17. Ephemeral Drainage 2 in the northeastern part of the project area, south of CR-22, facing south-southwest. The drainage originates from road runoff and dissipates in level ground after approximately 345 feet.

Photograph 18. Area mapped as intermittent stream in NWI, in the northeastern part of the project area, facing west. No indicators of OHWM or water flow.

Photograph 19. Area mapped as an intermittent stream in the NWI, facing west. No indicators of OHWM or water flow. This area and the area shown in Photo 18 are simply lower in elevation than the surrounding very gently sloping hills.

Photograph 20. Isolated Wetland 15 where wetland data Sampling Point 7 was recorded. This is typical of the 12 wetlands in the northeastern part of the project.

Appendix C

Data Summary

Observed Plant Species

Wetland Determination Forms

Ordinary High Water Mark Forms

Plant Species Observed in the Project Area

Scientific Name	Common Name	Wetland Indicator Status	Native/Introduced
Amaranthus albus	tumbleweed	FACU	Introduced
Amaranthus blitoides	prostrate pigweed	FACU	Introduced
Asclepias erosa	desert milkweed	UPL	Native
Avena fatua	oats	UPL	Introduced
Bromus madritensis	red brome	UPL	Introduced
Convolvulus arvensis	field bindweed	UPL	introduced
Croton setiger	turkey-mullein	UPL	native
Crypsis schoenoides	swamp grass	FACW	Introduced
Datura wrightii	Jimsonweed	UPL	native
Erigeron canadensis	horseweed	FACU	native
Eucalyptus sp.	eucalyptus	UPL	Introduced
Helianthus annuus	hairy-leaved sunflower	FACU	native
Heliotropium curassavicum	seaside heliotrope	FACU	native
Hirschfeldia incana	mustard	UPL	Introduced
Hordeum vulgare	common barley	NL	Introduced
Juncus bufonius	toad rush	FACW	native
Lactuca serriola	prickly lettuce	FACU	introduced
Laennecia coulteri	Coulter horseweed	FAC	Native
Malva neglecta	common mallow	UPL	introduced
Malvella leprosa	alkali mallow	FACU	Native
Medicago polymorpha	California burclover	FACU	Introduced
Nicotiana glauca	tree tobacco	FAC	Introduced
Phalaris sp.	canary grass	–	Introduced
Polygonum aviculare ssp. depressum	prostrate knotweed	FAC	introduced
Polypogon monspeliensis	rabbit's foot grass	FACW	introduced
Rumex dentatus	toothed dock	FACW	Introduced
Rumex crispus	curly dock	FAC	Introduced
Salix laevigata	Red willow	FACW	native
Salsola australis	Russian thistle	UPL	introduced
Sambucus nigra ssp. caerulea	blue elderberry	FACU	native
Sorghum halepense	Johnsongrass	FACU	introduced
Stephanomeria virgata	twiggy wreath plant	UPL	native
Tribulus terrestris	puncture vine	UPL	introduced
Trichostema lanceolatum	vinegar weed	FACU	native
Triticum aestivum	wheat	NL	introduced
Xanthium strumarium	cocklebur	FAC	native

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 10/16/2019
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-1
Investigator(s): Carolynn Daman Section, Township, Range: 24S, 10, 27E
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): slight concave Slope (%): 0
Subregion (LRR): C Lat: 35.862550 Long: -119.036094 Datum: WGS84
Soil Map Unit Name: Delvar clay loam, 2 to 9 percent slopes NWI classification: wash
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:
Sampling point on is a terrace within the White River floodplain. Heavy cattle grazing is evident. Point is on a low terrace approx. one foot above the low flow channel, separated by a low artificial berm.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	2	Y	FACW
2.			
3.			
4.			
	2 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Polypogon monspeliensis	10	Y	FACW
2. Bromus madritensis	20	Y	UPL
3. Medicago polymorpha	2	N	FACU
4. Rumex dentatus	1	N	FACW
5. Amaranthus albus	2	N	FACU
6. Xanthium strumarium	1	N	FAC
7. Hellanthus annuus	3	N	FACU
8.			
	39 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 59 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
Area heavily grazed by cattle. Difficult to determine some species due to minimal plant material remaining for identification.

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SOIL Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/2	100					sand	
3-16	2.5Y 7/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators including redox were present. Very dry sandy soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of flow including wrack, sediment or drift deposits, etc. It appears that the artificial berm is confining flow to the low flow channel. Passes FAC-Neutral test (2 to 1) but only one secondary indicator present -> wetland hydrology not present.

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 10/16/2019
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-2
Investigator(s): Carolynn Daman Section, Township, Range: 24S, 10, 27E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): C Lat: 35.904926 Long: -119.062463 Datum: WGS84
Soil Map Unit Name: Exeter loam, 2 to 5 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____ No ✓	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:
Sampling point is in an active agriculture plot, with a berm to the west, and recently tilled. Potential inundation observed in different years on aerial imagery, but no indicators of wetland hydrology present at the time of survey. Hydrophytic veg and hydric soils absent.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Cultivated hay	20	Y	UPL
2. Polygonum aviculare ssp. depressum	10	N	FAC
3. Lycopersicon esculentum	2	N	UPL
4.			
5.			
6.			
7.			
8.			
	32 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 68 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 10	x 3 = 30
FACU species 0	x 4 = 0
UPL species 22	x 5 = 110
Column Totals: 32 (A)	140 (B)

Prevalence Index = B/A = 4.4

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
Vegetation heavily disturbed by recent tilling of the ag field. Vegetation at the point does not pass the dominance or prevalence tests.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	5Y 5/2	100					clay loam	
6-16	5Y 3/2	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators of hydric soils observed, including redox. Very dry soil and extremely compacted. A grayish color observed at the surface, slightly different than soil in adjacent areas. May be problematic due to frequent ag ops including tilling and disking.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Point is very slightly lower in elevation than surrounding area. Potential inundation observed in different years on aerial photos, but no indicators of wetland hydrology present at the time of survey. Does not pass the FAC-Neutral Test (0 to 1).

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 10/16/2019
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-3
Investigator(s): Carolynn Daman Section, Township, Range: 24S, 10, 27E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): C Lat: 35.895232 Long: -119.018375 Datum: WGS84
Soil Map Unit Name: Greenfield sandy loam, 0 to 2 percent slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Sampling point located generally within an active agriculture plot, recently harvested, but the depression was not tilled. Potential wetland feature observed in aerial photos and in the field, therefore data collected.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10 ft radius)			
1. Polypogon monspeliensis	30	Y	FACW
2. Polygonum aviculare ssp. depressum	20	Y	FAC
3. Trichostema lanceolatum	1	N	FACU
4. Avena fatua	5	N	UPL
5. Agriculture barley	2	N	UPL
6. Erigeron canadensis	1	N	FACU
7. Croton setiger	1	N	UPL
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
Point located at transition of vegetation between depression and adjacent ag field. Hydrophytic vegetation is dominant. Predominately Polypogon monspeliensis in center of depression and transitions to upland species on the banks.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	97	5YR 4/6	3	C, CS	PL, M	loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hard clay

Depth (inches): 6 inches

Hydric Soil Present? Yes ✓ No ___

Remarks:

Very hard loamy soil, heavily compacted and very dry. Depleted matrix observed in upper 6 inches. Redox concentrations were present in matrix and pore linings in upper 6 inches. Hard restrictive clay layer below 6 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation observed in Google Earth aerial April 2017 when the area was not recently disturbed by tilling. Surface soil cracks present. Also passes FAC-Neutral Test.

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 10/16/2019
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-4
Investigator(s): Carolynn Daman Section, Township, Range: 24S, 10, 27E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): C Lat: 35.895341 Long: -119.018383 Datum: WGS84
Soil Map Unit Name: Greenfield sandy loam, 0 to 2 percent slope NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:
Point located in active agriculture plot, recently harvested. Aerial imagery indicated potential wetland feature but no hydrophytic vegetation, wetland hydrology, or hydric soils were present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10 ft radius)			
1. Erigeron canadensis	10	N	FACU
2. Trichostema lanceolatum	5		FACU
3. Polypogon monspeliensis	2		FACW
4. Agriculture barley	3		UPL
5. Polygonum aviculare ssp. depressum	5		FAC
6. Malva neglecta	1		UPL
7. Avena fatua	10	Y	UPL
8. Laennecia coulteri	20	Y	FAC
	56	= Total Cover	
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 44 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 2	x 2 =	4
FAC species 25	x 3 =	75
FACU species 15	x 4 =	60
UPL species 14	x 5 =	70
Column Totals: 56 (A)		209 (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
Desiccated vegetation recently mowed during agriculture operations Vegetation did not pass Dominance or Prevalence tests.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/2	100						texture = loamy sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: highly compacted soil

Depth (inches): 12 inches

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators of hydric soils observed, including redox. Soils were highly compacted and very dry.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology observed. Does not pass the FAC-Neutral Test = 0 to 2.

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 10/16/2019
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-5
Investigator(s): Carolynn Daman Section, Township, Range: 24S, 10, 27E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): C Lat: 35.893580 Long: -119.0022244 Datum: WGS84
Soil Map Unit Name: Exeter loam, 2 to 9 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:
Depression with hydrophytic vegetation, hydric soils and wetland hydrology present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Polygonum aviculare ssp. depressum	30	Y	FAC
2. Juncus bufonius	30	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
Vegetation at this point passes the Dominance test. Depression with dominant wetland veg and surrounded by upland species in adjacent farm field.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/3	80	5YR 4/6	20	C,CS	M	sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: highly compacted soil

Depth (inches): 10 inches

Hydric Soil Present? Yes ✓ No ___

Remarks:

Hydric soils present with redox depressions within the upper 6 inches. Redox concentrations were present in matrix and pore linings in upper 6 inches. Hard restrictive clay loam, heavily compacted and very dry, below 10 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation observed in Google Earth aerial April 2017 when the area was not recently disturbed by tilling. Surface soil cracks present. Also passes the FAC-Neutral Test (2 to 0).

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 10/16/2019
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-6
Investigator(s): Carolynn Daman Section, Township, Range: 24S, 10, 27E
Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): C Lat: 35.895341 Long: -119.018383 Datum: WGS84
Soil Map Unit Name: Colpien loam, 0 to 2 percent slopes NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil ✓, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Area mapped in NWI as a freshwater emergent wetland, however no hydric soils, or hydrophytic vegetation present. Based on current conditions, this area is not a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Lactuca serriola	1	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	1 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species 1	x 4 = 4
UPL species	x 5 =
Column Totals: 1 (A)	4 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
A recent fire burned vegetation and plant identification was difficult. Adjacent vegetation consisted of upland grasses including Bromus madritensis and Avena fatua. Problematic vegetation due to fire.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	5YR 3/2	100						texture = silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: highly compacted soil

Depth (inches): inches

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators of hydric soils observed, including redox. Very hard soil and heavily compacted below 8 inches. May be problematic due to frequent ag operations including tilling and disking.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Point is slightly lower in elevation than surrounding area. Surface soil cracks observed but may be caused by heat of fire. Did not pass FAC-Neutral Test (0 to 1) but veg problematic.

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 01/07/2020
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-7, WET
Investigator(s): J. True Section, Township, Range: Fountain Springs, T23S R28E S32
Landform (hillslope, terrace, etc.): closed depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): C Lat: 35.88249° Long: -118.97847° Datum: WGS84
Soil Map Unit Name: Centerville clay, 2 to 9 percent slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Wetland hydrology and hydric soils are present. Vegetation is problematic with significant disturbance from cattle grazing. Evaluated nearby reference site with similar wetlands, determined hydrophytic veg would be present in absence of grazing. This point is in a wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Erodium sp.	3	Y	UPL
2. Bromus sp.	3	Y	UPL
3. Trichostema lanceolatum	3	Y	FACU
4. Amsinckia sp.	1	N	UPL
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 3	x 4 = 12
UPL species 7	x 5 = 35
Column Totals: 10 (A)	47 (B)

Prevalence Index = B/A = 4.7

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
Wetland hydrology and hydric soils are present. Point does not pass hydrophytic veg dominance or prevalence tests. However, vegetation is problematic with significant disturbance from cattle grazing. Veg density much lower than surrounding uplands. Evaluated nearby reference site with similar wetlands, determined hydrophytic veg would be present in absence of grazing.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-7, WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/1	90	5YR 5/6	10	C	M	clay loam	
4-8	5YR 3/3	90	5YR 5/6	10	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

Wetland is in a depression lower than surrounding uplands. Distinct redox concentrations present throughout the matrix and oxidized rhizospheres are present along some living roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✓ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland is a level depression, lower in elevation than surrounding areas. Surface soil cracks observed. Oxidized rhizospheres present along some living roots. Saturation visible in aerial imagery.

US Army Corps of Engineers Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rexford Solar Farm City/County: Tulare County Sampling Date: 01/07/2020
Applicant/Owner: 20SD 8ME, LLC State: CA Sampling Point: SP-7, UPL
Investigator(s): J. True Section, Township, Range: Fountain Springs, T23S R28E S32
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): near toe of slope Slope (%): 2
Subregion (LRR): C Lat: 35.88260° Long: -118.97841° Datum: WGS84
Soil Map Unit Name: Centerville clay, 2 to 9 percent slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:
Wetland hydrology, hydric soils, and hydrophytic vegetation are not present. Vegetation is problematic with significant disturbance from cattle grazing. However, in absence of wetland hydrology and hydric soils, this point is in a upland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft radius)			
1. None			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Erodium sp.	40	Y	UPL
2. Bromus sp.	40	Y	UPL
3. Trichostema lanceolatum	10	N	FACU
4. Amsinckia sp.	2	N	UPL
5.			
6.			
7.			
8.			
	92 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft radius)			
1. None			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 8 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 10	x 4 = 40
UPL species 82	x 5 = 410
Column Totals: 92 (A)	450 (B)

Prevalence Index = B/A = 4.9

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
Veg density much higher here than in the wetland point in the depression below. Landscape position (slope) not conducive to supporting hydrophytic veg. Point does not pass hydrophytic veg dominance or prevalence tests. Vegetation is problematic with significant disturbance from cattle grazing. However, wetland hydrology and hydric soils are not present.

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: SP-7, UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	5YR 3/2	100	None				clay loam	
2-16	5YR 4/3	100	None				clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators of hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Point is on slight slope above depressional wetland. Landscape position is not conducive to collecting water. No indicators of wetland hydrology present.

US Army Corps of Engineers Arid West – Version 2.0

Ordinary High Water Mark Data Forms

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Rexford **Project Number:** 19-08436 **Stream:** White River **Investigator(s):** Carolynn Daman	**Date:** 10/16/19 **Town:** Duc **Photo begin file#:** 4	**Time:** 1239 **State:** CA **Photo end file#:** 10
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	**Location Details:** West of Road 240 **Projection:** CA State Plane 4 **Datum:** WGS84 **Coordinates:** 35.862766/-119.035805	

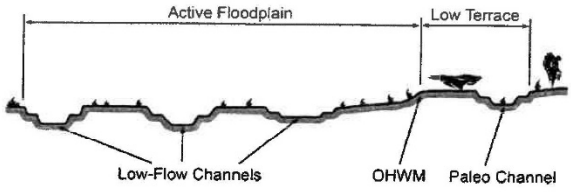
Potential anthropogenic influences on the channel system:
Rockslope protection on banks, cattle presence.

Brief site description: White River will flow in western Direction under bridge on Road 240. Concrete corrugated pipe culvert original bridge with new steel bridge on top.

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

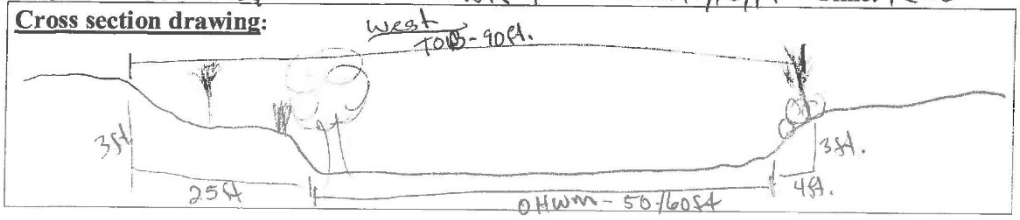


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: 19-08436 **Cross section ID:** WR-1 **Date:** 10/16/19 **Time:** 1226

Cross section drawing:



OHWM

GPS point: 35.862660/-119.036022

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Defined bed & bank, devoid of vegetation, predominately vegetated banks w/ upland species.

Floodplain unit:

☒ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: 35.862787/-119.036033

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 12 % Tree: 2 % Shrub: 0 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Drift deposits within channel along fenceline/culvert bridge downstream, defined bed & bank. 2 large willows observed w/in OHWM.

Project ID: 19-08436 **Cross section ID:** WR-1 **Date:** 10/16/19 **Time:**

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: 35.862545/-119.036027

Characteristics of the floodplain unit:
Average sediment texture: Coarse silt
Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
☐ NA ☒ Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
☐ Mudcracks ☐ Soil development
☐ Ripples ☐ Surface relief
☐ Drift and/or debris ☐ Other: _____
☒ Presence of bed and bank ☐ Other: _____
☐ Benches ☐ Other: _____

Comments: Broken concrete — Sever disturbance by grazing cattle. Artificial berms created by rock/slope protection. Upland vegetation dominate with cocklebur & sunflower species, thistle sp., tarweed,

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: _____
Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%
Community successional stage:
☐ NA ☐ Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
☐ Mudcracks ☐ Soil development
☐ Ripples ☐ Surface relief
☐ Drift and/or debris ☐ Other: _____
☐ Presence of bed and bank ☐ Other: _____
☐ Benches ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Rexford
Project Number: 19-08436
Stream: Ephemeral Drainage #1
Investigator(s): Carolynn Daman

Date: 10/17/19
Town:
Photo begin file#: 32

Time: 1615
State: CA
Photo end file#: 33

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
West of SR-65

Projection: CA State Plane 4 **Datum:** WGS84
Coordinates: 35.825808/-119.054148

Potential anthropogenic influences on the channel system:
Corregated pipe culvert under SR-65. SR-65 to the east. Vehicle travel through drainage and active ag. equipment tracks around.

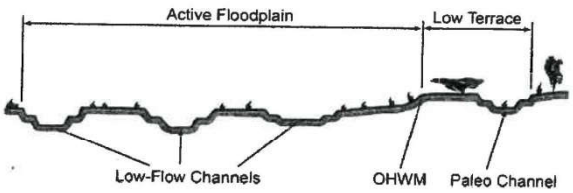
Brief site description: Ephemeral drainage flow presumed from culvert to west w/in active agriculture field. Very narrow and dissipates into surrounding lacking stream features w/ no connectivity to any stream downstream.

Checklist of resources (if available):

- ☐ Aerial photography
  Dates:
- ☒ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

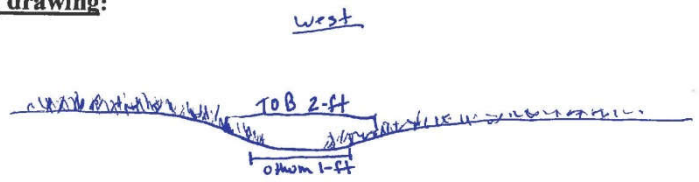


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: 19-08436 **Cross section ID:** ED-1 **Date:** 10/17/19 **Time:** 1615

Cross section drawing:



OHWM

GPS point: 35.8258/-119.05414

Indicators:

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:
Slight break in slope and change in vegetation cover. Some areas devoid of in-channel vegetation. Further downstream vegetation begins to be w/in channel

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: 35.8258/-119.05414

Characteristics of the floodplain unit:
Average sediment texture: Coarse silt
Total veg cover: 20 % Tree: Ø % Shrub: Ø % Herb: 20 %
Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments:
Presence of bed and bank @ the toe of slopes on converging hillslopes.

APPENDIX E

CULTURAL AND TRIBAL CULTURAL RESOURCES

APPENDIX E.1
TRIBAL CONSULTATION PROCESS

Consultation Notice – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
SACRED LAND FILE (SLF) REQUEST														
Native American Heritage Commission														Applicant consultant, Rincon Consultants, Inc., requested SLF listing; NAHC responded 10/8/19 with "negative" results and tribal contact listing.
CONSULTATION REQUEST LETTERS														
Kern Valley Indian Community Robert Robinson, Co-Chairperson P.O. Box 1010 Lake Isabella, CA 93240	X			X	X				2/25/20		2/25/20 7013171000 0019566863	3/3/20	4/2/20	2/14/20, NOP was mailed and emailed to representative 4/10/20, J. Willis sent follow up email for consultation 5/1/20 no response received to date.
Kern Valley Indian Community Julie Turner, Secretary P. Box 1010 Lake Isabella, CA 93240	X			X	X				2/25/20		2/25/20 7013171000 0019566856	3/3/20	4/2/20	2/14/20, NOP was mailed and emailed to representative 4/10/20, J. Willis sent follow up email for consultation 5/1/20 no response received to date.
Kern Valley Indian Community Brandy Kendricks 30741 Foxridge Court Tehachapi, CA 93561	X			X	X				2/25/20		2/25/20 7013171000 0019566849	3/17/20	4/16/20	2/14/20, NOP was mailed and emailed to representative 4/10/20, J. Willis sent follow up email for consultation 5/1/20 no response received to date.
Santa Rosa Rancheria Tachi Yokut Tribe Leo Sisco, Chairperson P. O. Box 8 Lemoore, CA 93245	X			X	X				2/25/20		2/25/20 7013171000 0019566832	2/28/20	3/29/20	2/14/20, NOP was mailed and emailed to representative 2/25/20, see comments for Shana Powers 4/10/20, see comments for Shana Powers
Santa Rosa Rancheria Tachi Yokut Tribe Robert Jeff, Vice-Chair P. O. Box 8 Lemoore, CA 93245	X			X	X				2/25/20		2/25/20 7013171000 0019566825	2/28/20	3/29/20	2/14/20, NOP was mailed and emailed to representative 2/25/20, see comments for Shana Powers 4/10/20, see comments for Shana Powers

Consultation Notice – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326														
TRIBE CONTACTED	**REQUEST TYPE**			**ITEMS & DOCUMENTS SUBMITTED**					**DELIVERY METHOD**			**CONSULTATION PERIOD**		**CONSULTATION / ACTIONS**
	AB 52	**SB 18**	**Sec 106**	**Map**	**Project Description**	**SLF Search Results**	**CHRIS Results**	**Other**	**E-mail**	**FedEx**	**Certified US Mail**	**Return Receipt**	**Period Ends**	**Summary**
Santa Rosa Rancheria Tachi Yokut Tribe Bianca Arias, Admin. Assistant. P. O. Box 8 Lemoore, CA 93245	X			X	X				2/25/20		2/25/20 7013171000 0019566795	2/28/20	3/29/20	2/14/20, NOP was mailed and emailed to representative 2/25/20, see comments for Shana Powers 4/10/20, see comments for Shana Powers
Santa Rosa Rancheria Cultural Department Shana Powers, Director P. O. Box 8 Lemoore, CA 93245	X			X	X				2/25/20		2/25/20 7013171000 0019566818	2/28/20	3/29/20	2/14/20, NOP was mailed and emailed to representative 2/14/20, S. Powers replied to NOP via email that the Tribe would like to be notified of any discoveries during construction but that they would defer comments to the Tule River Tribe. 2/25/20 S. Powers replied to AB 52 request via email and stated that the Tribe would defer comments to the Tule River and Tejon Tribes. 2/28/20, Colin Rambo, Cultural Resource Management Technician of Tejon Tribe replied via email that the Tribe would also defer to the Tule River Tribe as the area is outside of Tribe's area. 4/10/20, J. Willis sent email to S. Powers stating the request for notification would be made condition of approval and that the Tule River Tribe had been notified and provided with the documentation that they requested.
Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Greg Cuara, Cultural Specialist P. O. Box 8 Lemoore, CA 93245	X			X	X				2/25/20		2/25/20 7013171000 0019566801			2/14/20, NOP was mailed and emailed to representative 2/25/20, see comments for Shana Powers 4/10/20, see comments for Shana Powers

Consultation Notice – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326														
TRIBE CONTACTED	**REQUEST TYPE**			**ITEMS & DOCUMENTS SUBMITTED**					**DELIVERY METHOD**			**CONSULTATION PERIOD**		**CONSULTATION / ACTIONS**
	AB 52	**SB 18**	**Sec 106**	**Map**	**Project Description**	**SLF Search Results**	**CHRIS Results**	**Other**	**E-mail**	**FedEx**	**Certified US Mail**	**Return Receipt**	**Period Ends**	**Summary**
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P.O. Box 226 Lake Isabella, CA 93240	X			X	X				2/25/20		2/25/20 7013171000 0019566788	---	---	2/14/20, NOP was mailed and emailed to representative 3/23/20, envelope was returned to RMA; Postal Service attempted to deliver on 2/28/20, 3/3/20, 3/13/20; label states, "Return to Sender, Unclaimed, Unable to Forward" 4/10/20, J. Willis sent follow up email for consultation 5/1/20 no response received to date.
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258	X			X	X				2/25/20		2/25/20 7013171000 0019566771	3/3/20	4/4/20	2/14/20, NOP was mailed and emailed to representative 4/10/20, see notes for Kerri Vera
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258	X			X	X	X	X		2/25/20		2/25/20 7013171000 0019566764	3/3/20	4/4/20	2/14/20, NOP was mailed and emailed to representative 2/18/20, K. Vera replied to the NOP via email requesting further consultation, copies of the CHRIS search to be submitted, and that studies be prepared. 2/25/20, SSJIC report and SLF results emailed and mailed to K. Vera with the AB 52 request. 4/10/20, J. Willis emailed draft copy of the Cultural Resources Assessment for the Tribe's review. 5/1/20 no additional response to date.
Tule River Indian Tribe Dept. of Environmental Protection Felix Christman, Archaeological Monitor P. O. Box 589 Porterville, CA 93258	X			X	X				2/25/20		2/25/20 7013171000 0019566757	3/3/20	4/4/20	2/14/20, NOP was mailed and emailed to representative 4/10/20, see notes for Kerri Vera

Consultation Notice – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326														
TRIBE CONTACTED	**REQUEST TYPE**			**ITEMS & DOCUMENTS SUBMITTED**					**DELIVERY METHOD**			**CONSULTATION PERIOD**		**CONSULTATION / ACTIONS**
	AB 52	**SB 18**	**Sec 106**	**Map**	**Project Description**	**SLF Search Results**	**CHRIS Results**	**Other**	**E-mail**	**FedEx**	**Certified US Mail**	**Return Receipt**	**Period Ends**	**Summary**
Wuksache Indian Tribe/ Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906	X			X	X				2/25/20		2/25/20 7013171000 0019566740			2/14/20, NOP was mailed and emailed to representative 4/10/20, J. Willis sent follow up email for consultation 5/1/20 no response received to date.

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Brandy Kendricks
Date: 2/25/2020 4:37 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_KVIC-Kendricks.pdf

Good afternoon Ms. Kendricks.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

Have a wonderful evening.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Brandy Kendricks
Kern Valley Indian Community
30741 Foxridge Court
Tehachapi, CA 93561

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

Dear Ms. Kendricks,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Rexford Solar Farm (PSP 19-073) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) was requested for the Project. The SLF search returned on October 8, 2019, with "negative" results; however, the NAHC recommended consultation with your Tribe. Results of the SLF search will be made available upon the release of the EIR for public review. However, results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

A records search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC). The records search dated October 1, 2019, indicated that twenty-four (24) reports have been prepared and fifteen (15) recorded resources within the project area or ½ mile radius. As such, a Cultural Resources Study is being prepared for the project site. The study may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification within 30 days, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Hector Guerra, Chief of Environmental Planning, by phone at (559) 624-7121, or by email at hguerra@co.tulare.ca.us.

Sincerely,

Jessica R. Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachments: Project description
Project location maps

Project Description:

The Project includes the construction and operation of an up to 700 megawatt alternative current (MW AC) solar photovoltaic (PV) facility and an up to 700 MW AC energy storage system (ESS) on approximately 3,614 gross acres of land (on 40 discontiguous parcels) in unincorporated south-central Tulare County, California. The proposed Project would include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, ESS, access roads and fencing, and on-site substation. An operations and maintenance building may be constructed on the site.

The proposed Project would involve the construction of both transmission and collector lines. Power generated by the proposed Project would be transmitted to the Southern California Edison (SCE) Vestal Substation via an up to 230 kilovolt (kV) overhead and/or underground gen-tie line. The proposed transmission and/or collector lines would extend along existing roadway rights-of-way from various portions of the Project site (where substations are located) ultimately connecting to the Southern California Edison Vestal Substation. The transmission and/or collector lines would be located along portions of Road 232, Avenue 56, Avenue 64, Road 224, Road 240, Avenue 32, Richgrove Drive, and SR 65, or could possibly utilize additional nearby routings. The total length of the transmission and/or collector lines would be approximately 13 miles in length.

Assessor Parcel Numbers:

321-040-007, -008, -011, -025

321-070-014, -026

321-110-016

321-120-002, -004

321-130-005

321-140-007, -008, -010, -012, -013, -014, -015

321-190-001, -002

321-200-006

321-210-004

323-040-006, -007, -008

339-050-004, -006, -007, -008, -013

339-070-014, -015, -016, -026

339-080-005, -013, -015, -016

339-110-001, -008, -009

Figure 1. Regional Location Map

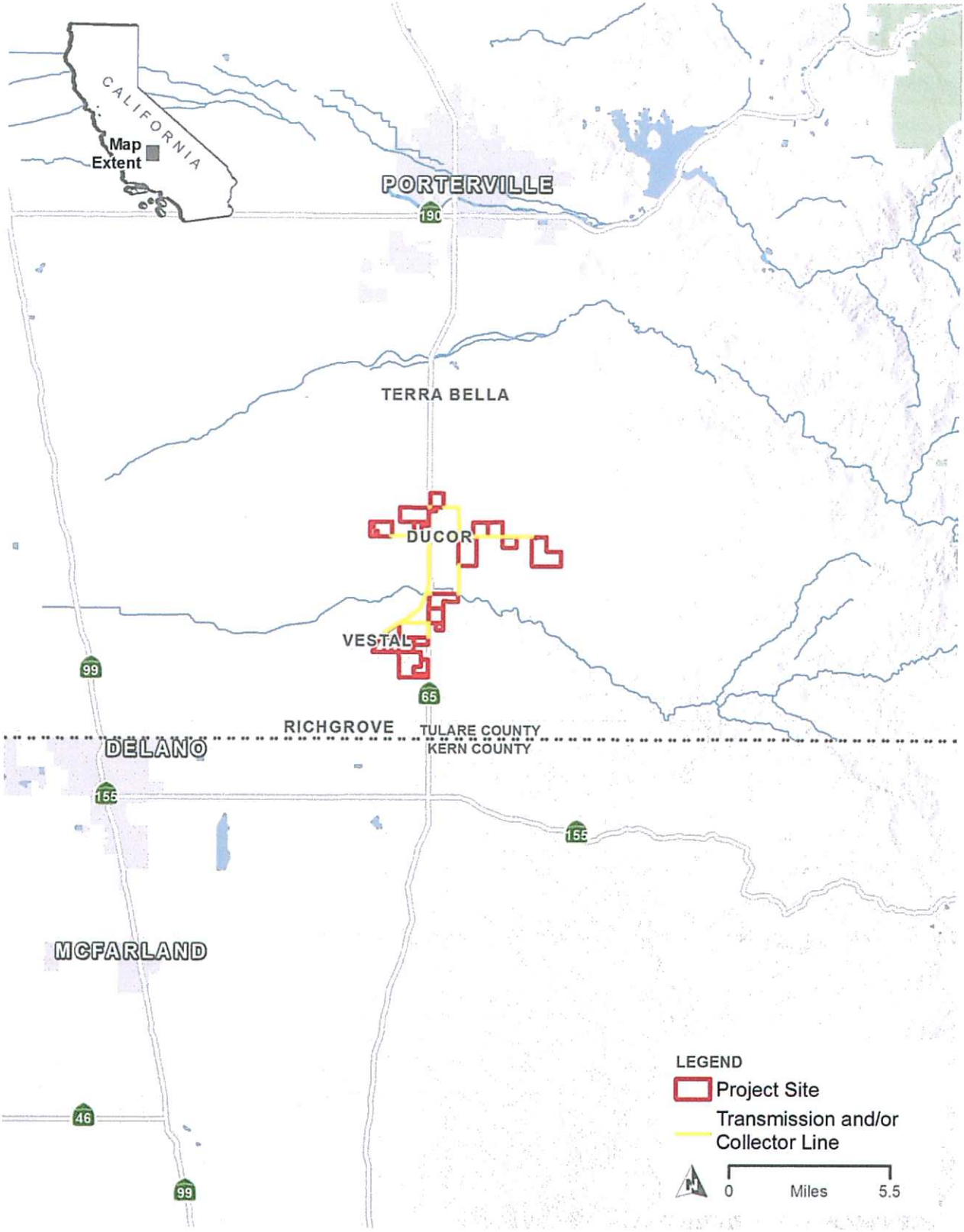
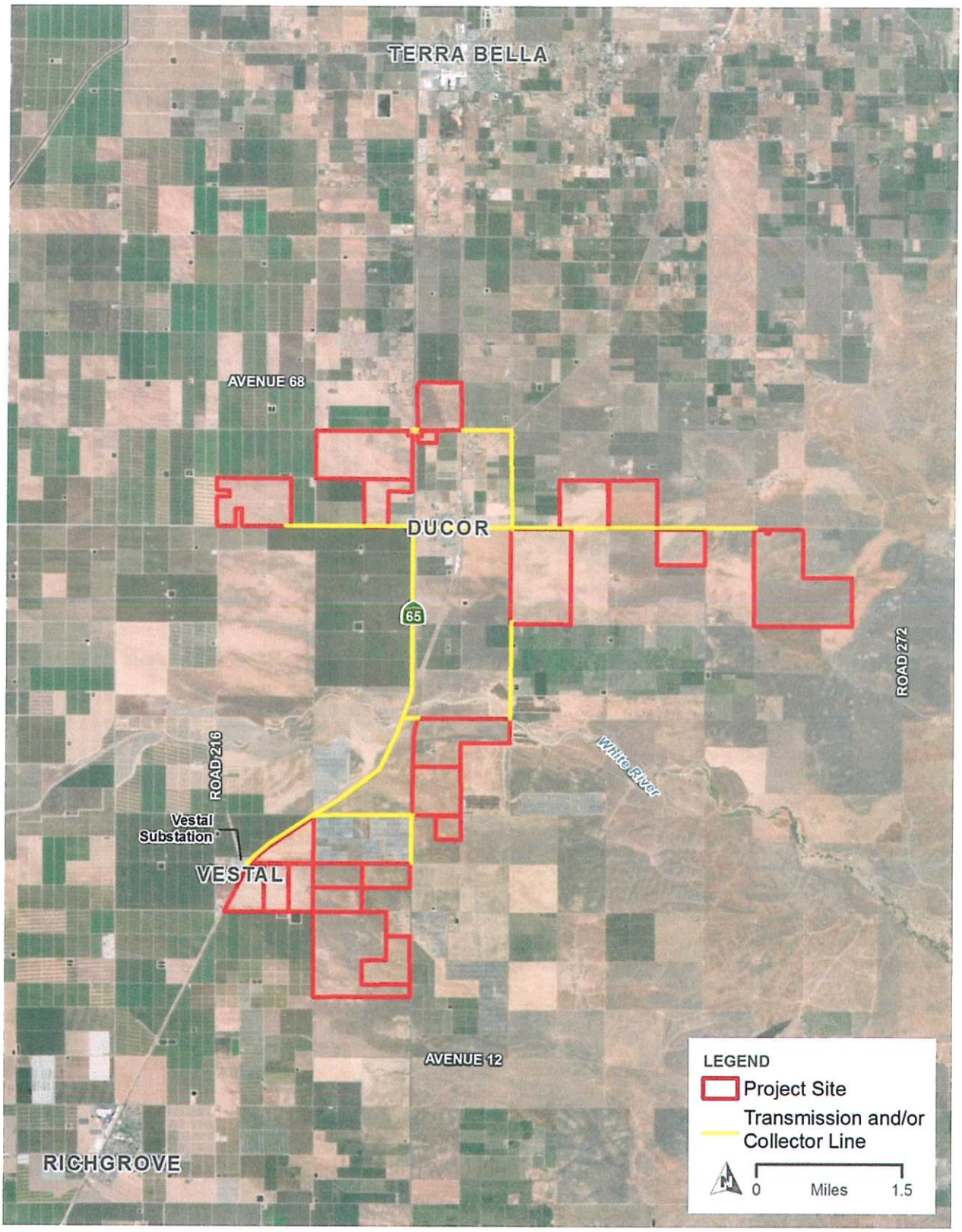


Figure 2. Vicinity Map



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To: Robert Robinson
Date: 2/25/2020 4:37 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_KVIC-Robinson.pdf

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Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Robert Robinson, Co-Chairperson
Kern Valley Indian Community
P.O. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

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Planner IV
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JWillis@co.tulare.ca.us

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321-120-002, -004

321-130-005

321-140-007, -008, -010, -012, -013, -014, -015

321-190-001, -002

321-200-006

321-210-004

323-040-006, -007, -008

339-050-004, -006, -007, -008, -013

339-070-014, -015, -016, -026

339-080-005, -013, -015, -016

339-110-001, -008, -009

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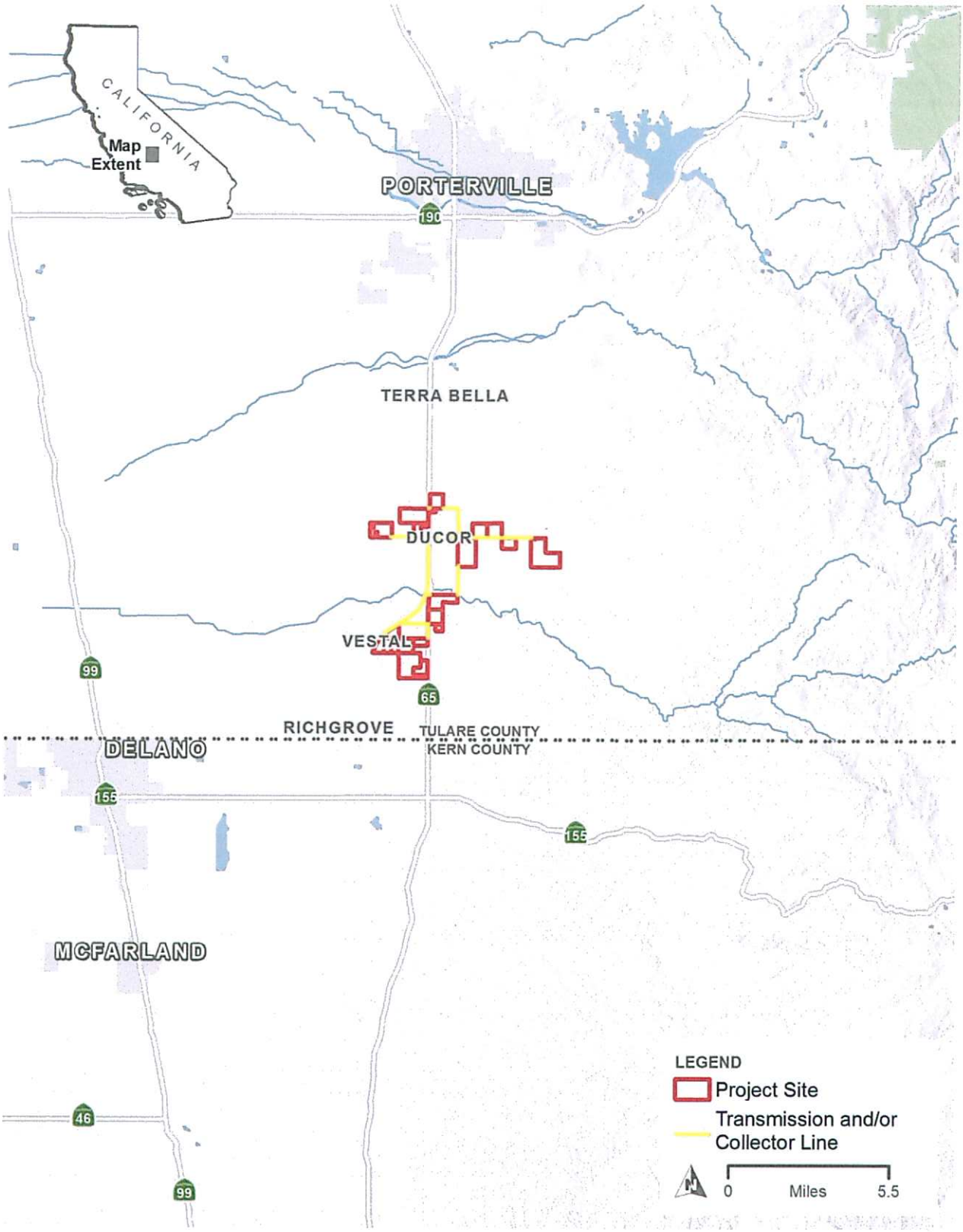
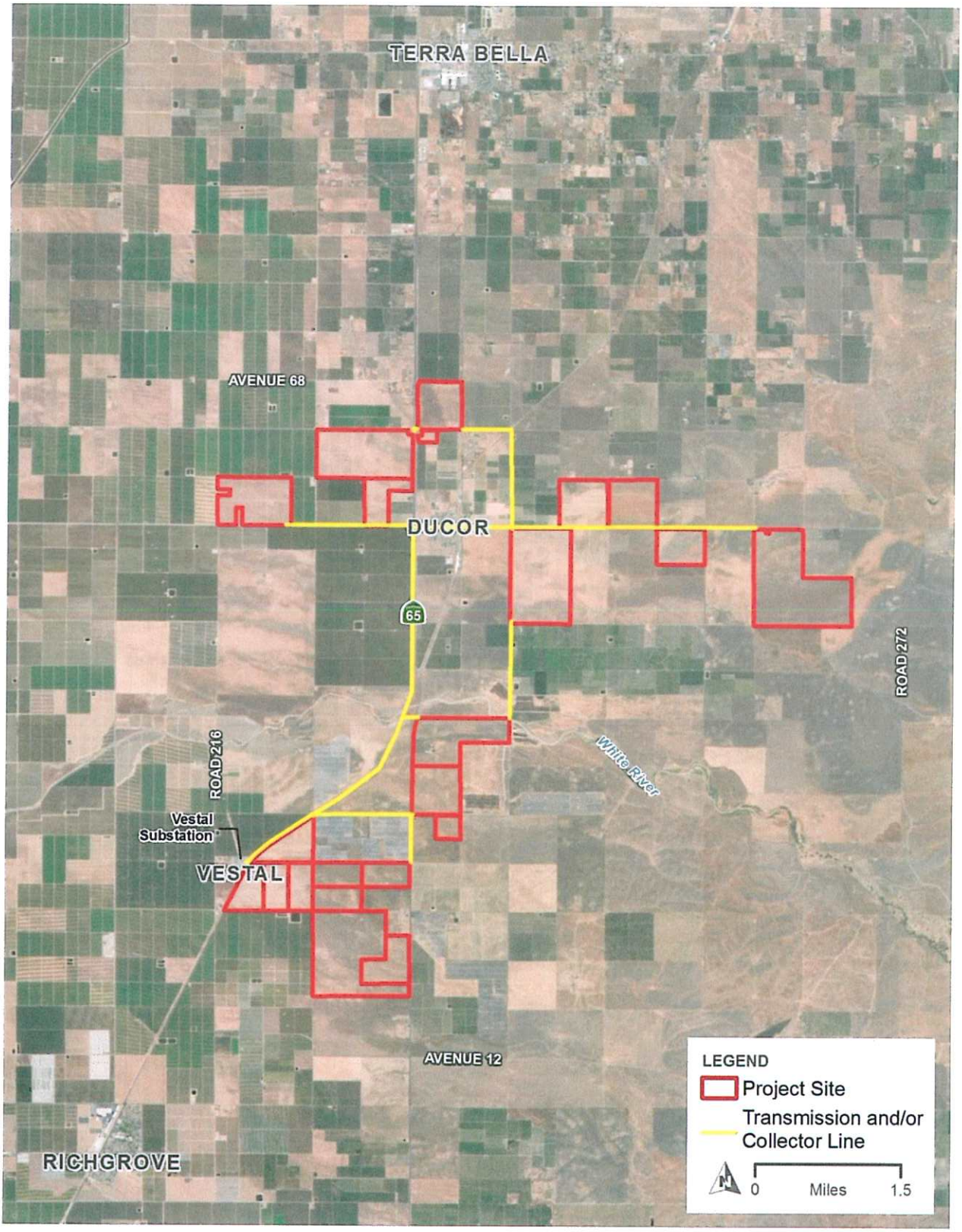


Figure 2. Vicinity Map



Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Julie Turner
Date: 2/25/2020 4:37 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_KVIC-Turner.pdf

Good afternoon Ms. Turner.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

Have a wonderful evening.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Julie Turner, Secretary
Kern Valley Indian Community
P. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

Dear Ms. Turner,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Rexford Solar Farm (PSP 19-073) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Hector Guerra, Chief of Environmental Planning, by phone at (559) 624-7121, or by email at hguerra@co.tulare.ca.us.

Sincerely,

Jessica R Willis

Jessica Willis
Planner IV
(559) 624-7121
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Attachments: Project description
Project location maps

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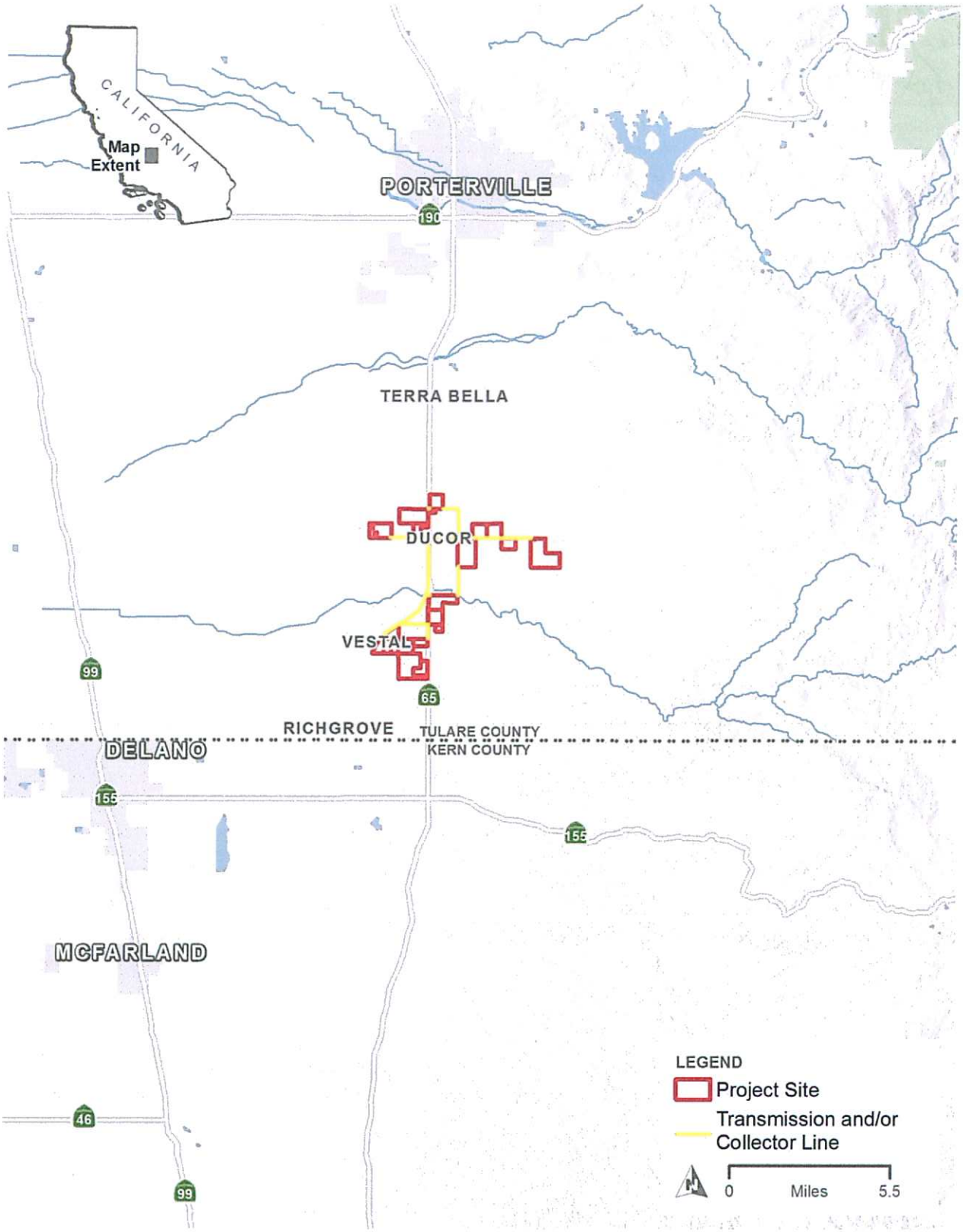

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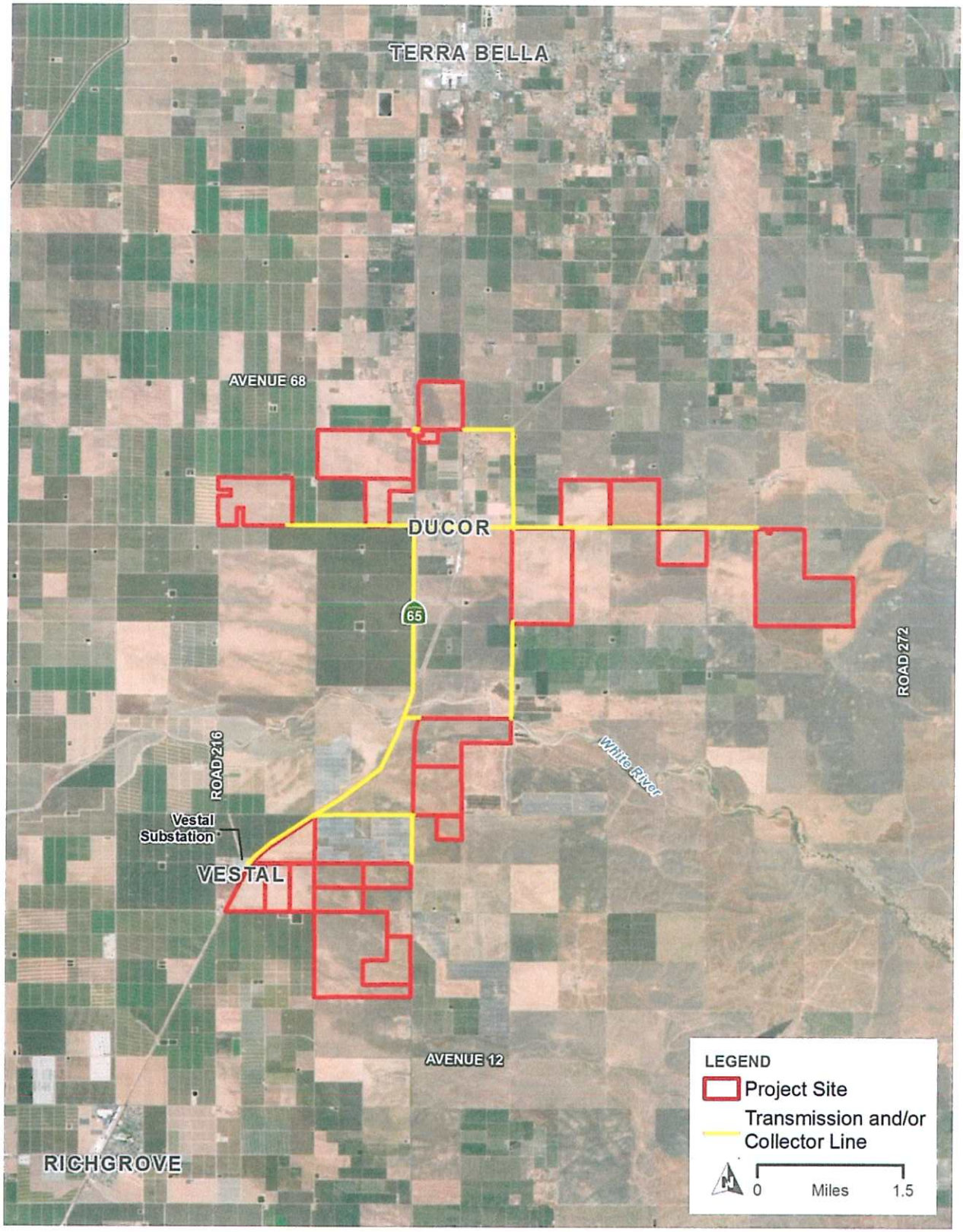

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Bianca Arias
Date: 2/25/2020 4:37 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_SRR-Arias.pdf

Good afternoon Ms. Arias.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

Have a wonderful evening.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

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Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Bianca Arias, Administrative Assistant
Santa Rosa Rancheria Tachi Yokut Tribe
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

Dear Ms. Arias,

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Sincerely,

Jessica R. Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

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Project location maps

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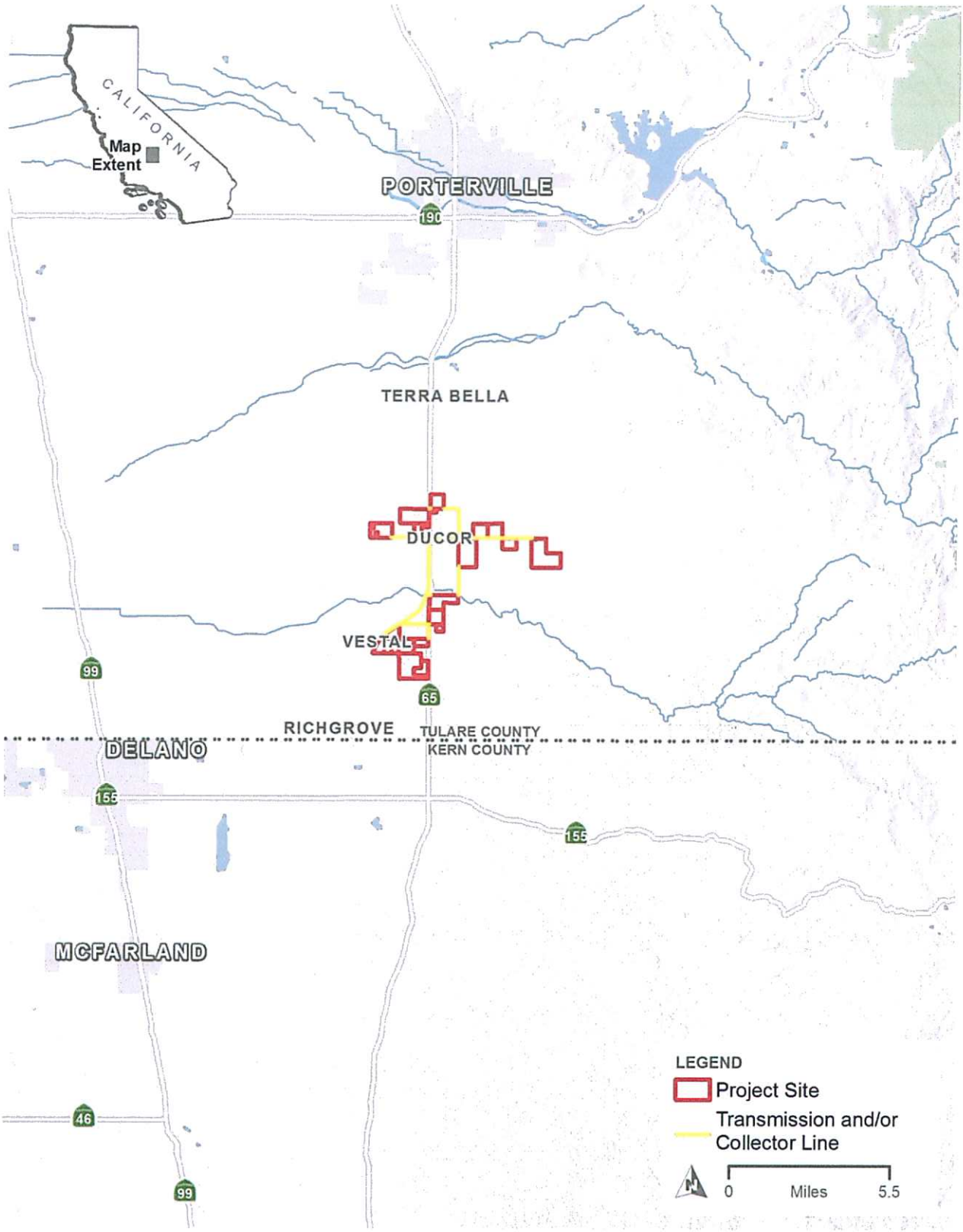

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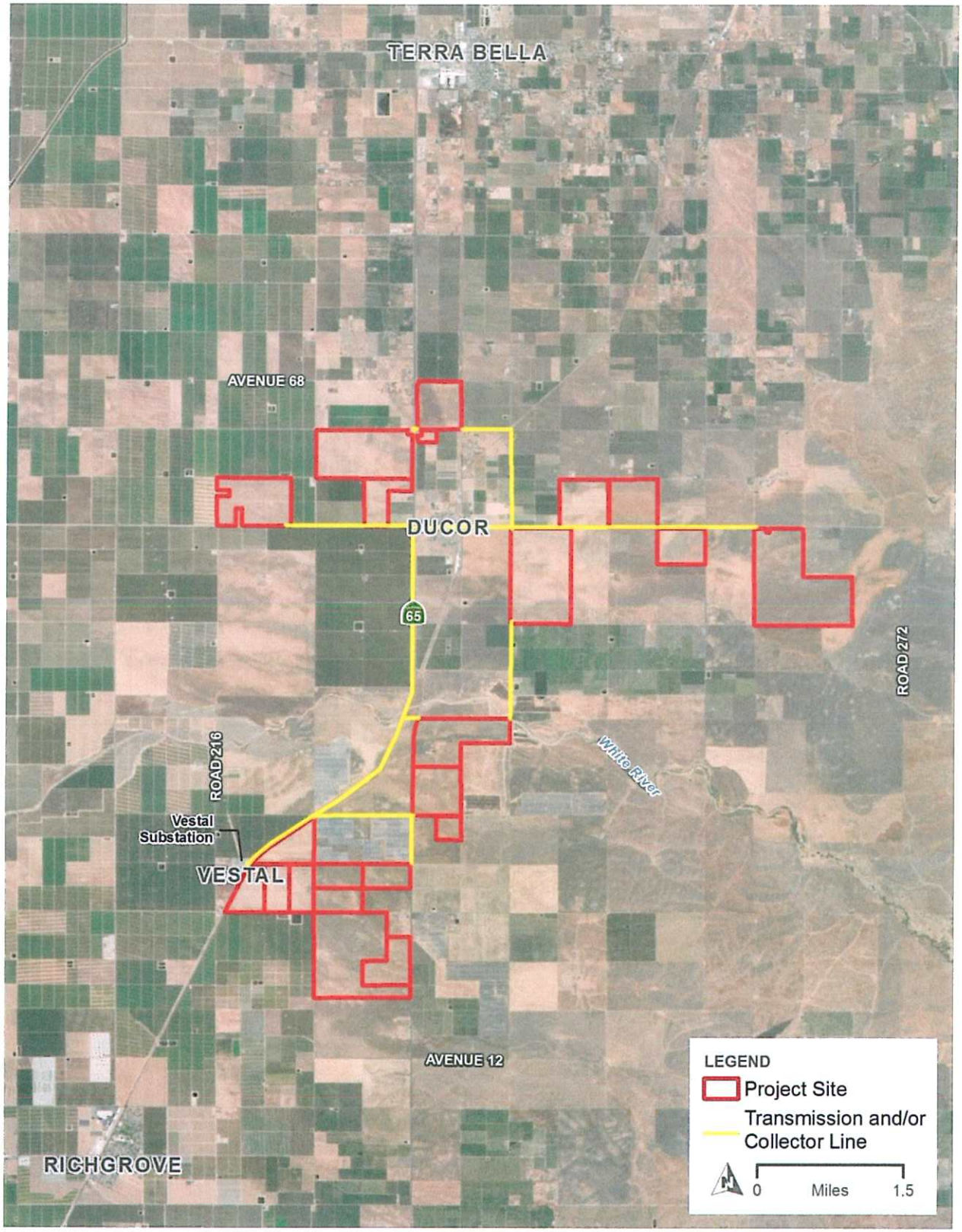

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Greg Cuara
Date: 2/25/2020 4:36 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_SRR-Cuara.pdf

Good afternoon Mr. Cuara.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

Have a wonderful evening.

Jessica Willis
Planner IV
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Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

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Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Greg Cuara, Cultural Specialist
Santa Rosa Rancheria Tachi Yokut Tribe
Cultural Department
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

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Sincerely,

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Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

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Project location maps

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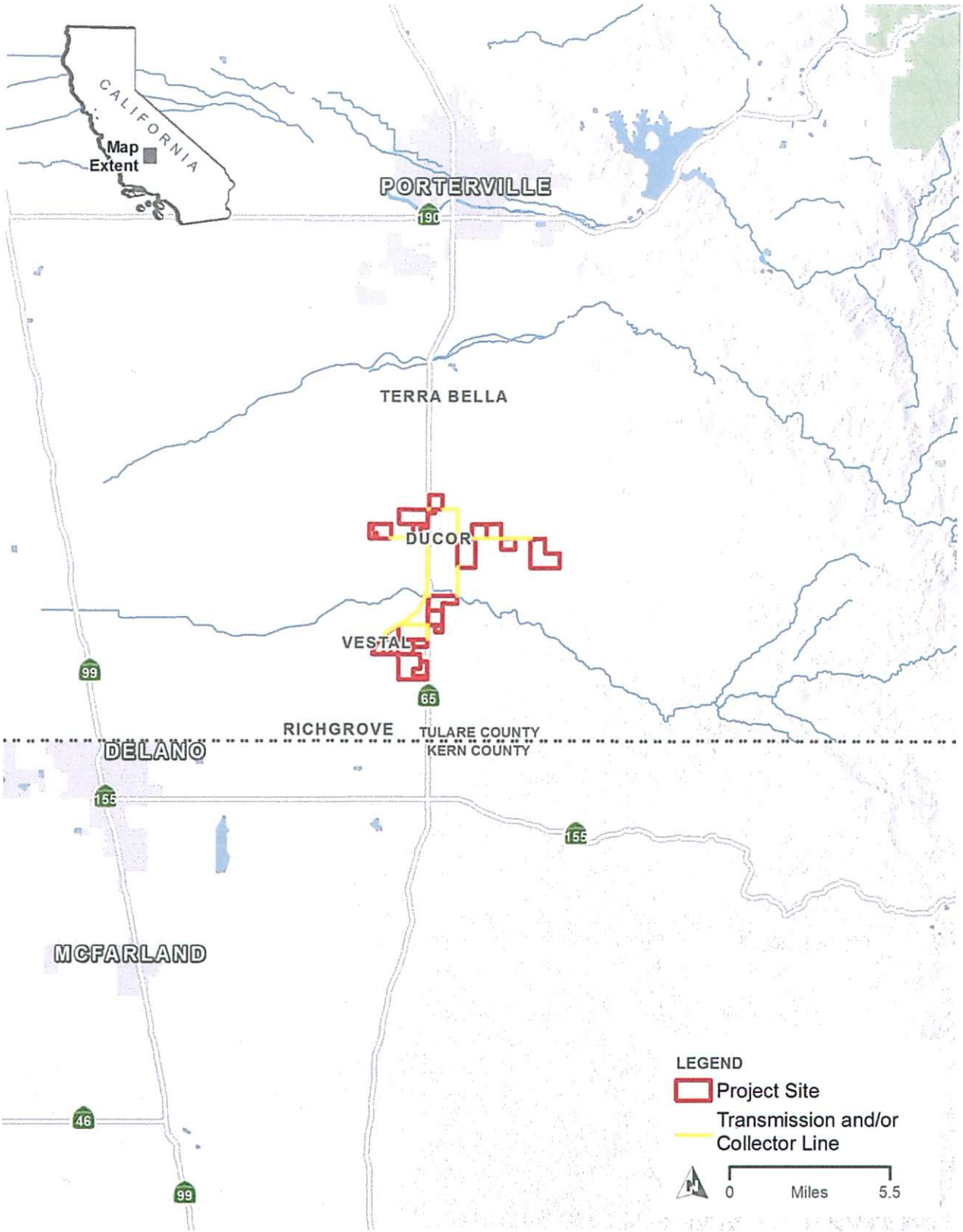

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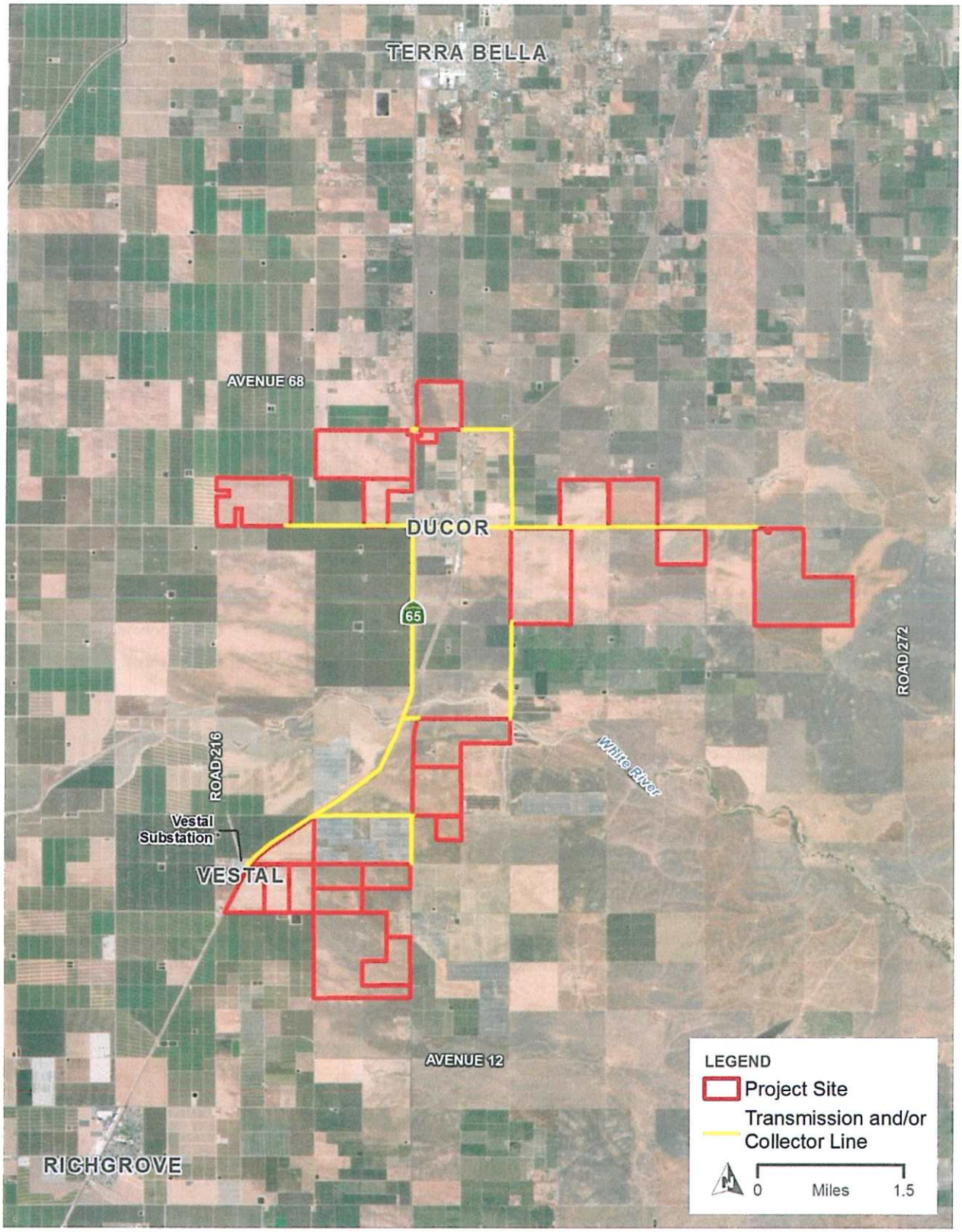

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Robert Jeff
Date: 2/25/2020 4:36 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_SRR-Jeff.pdf

Good afternoon Mr. Jeff.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

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Michael Washam — Economic Development and Planning
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Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Robert Jeff, Vice-Chairperson
Santa Rosa Rancheria Tachi Yokut Tribe
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

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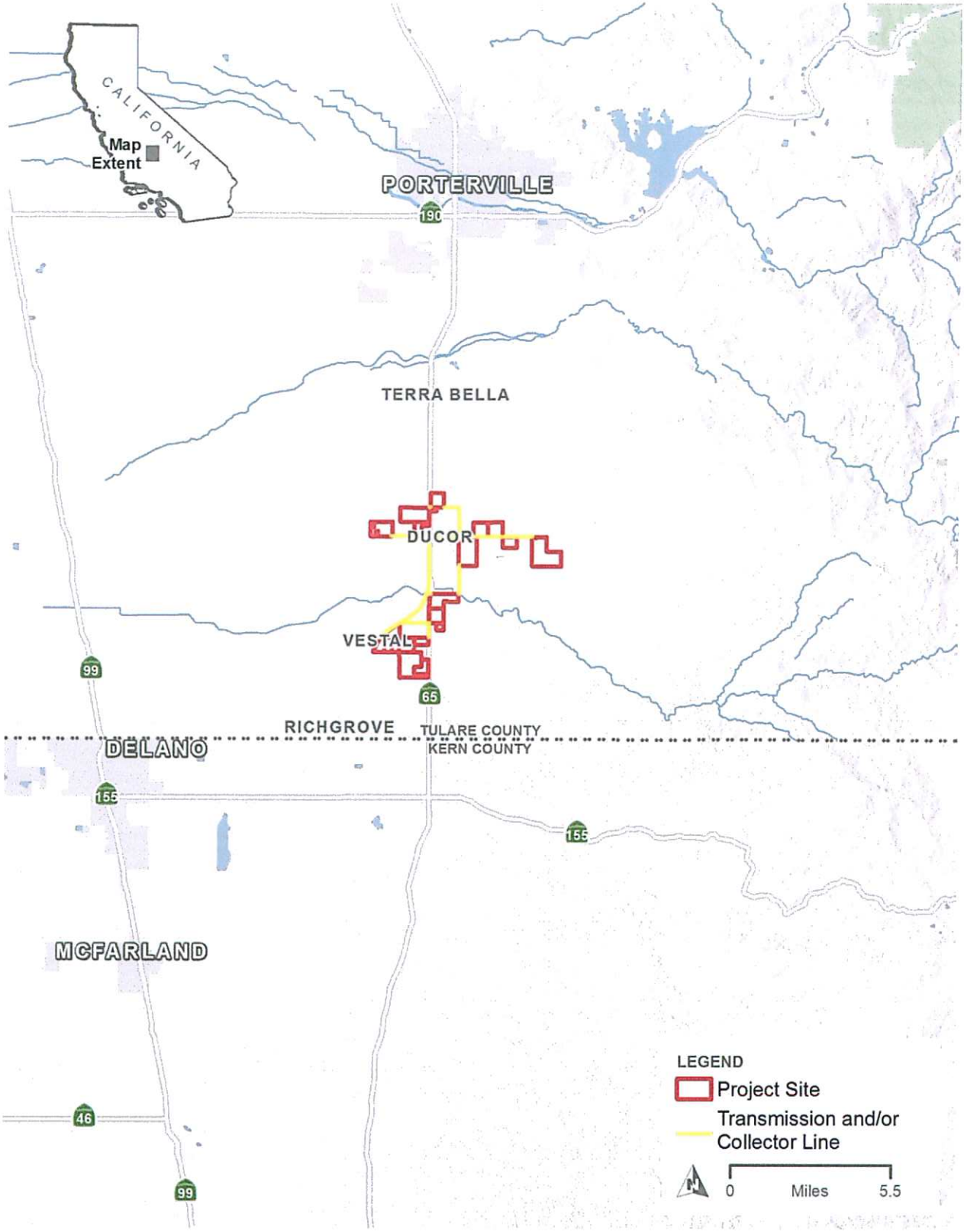

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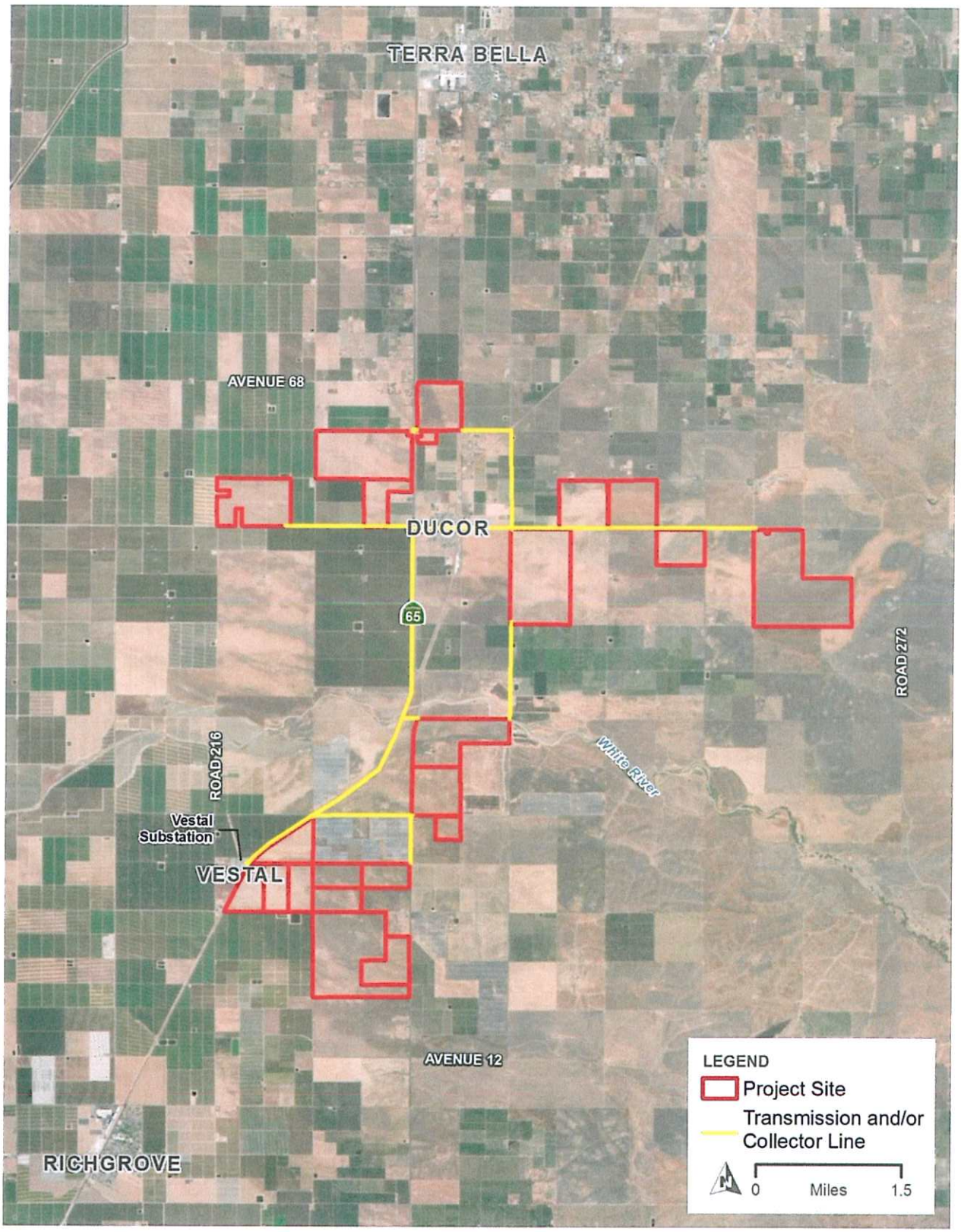

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Shana Powers
Date: 2/25/2020 4:36 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_SRR-Powers.pdf

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February 25, 2020

Shana Powers, Director
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Cultural Department
P. O. Box 8
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RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

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Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Rexford Solar Farm (PSP 19-073) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Project.

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Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Hector Guerra, Chief of Environmental Planning, by phone at (559) 624-7121, or by email at hguerra@co.tulare.ca.us.

Sincerely,

Jessica R Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachments: Project description
Project location maps

Project Description:

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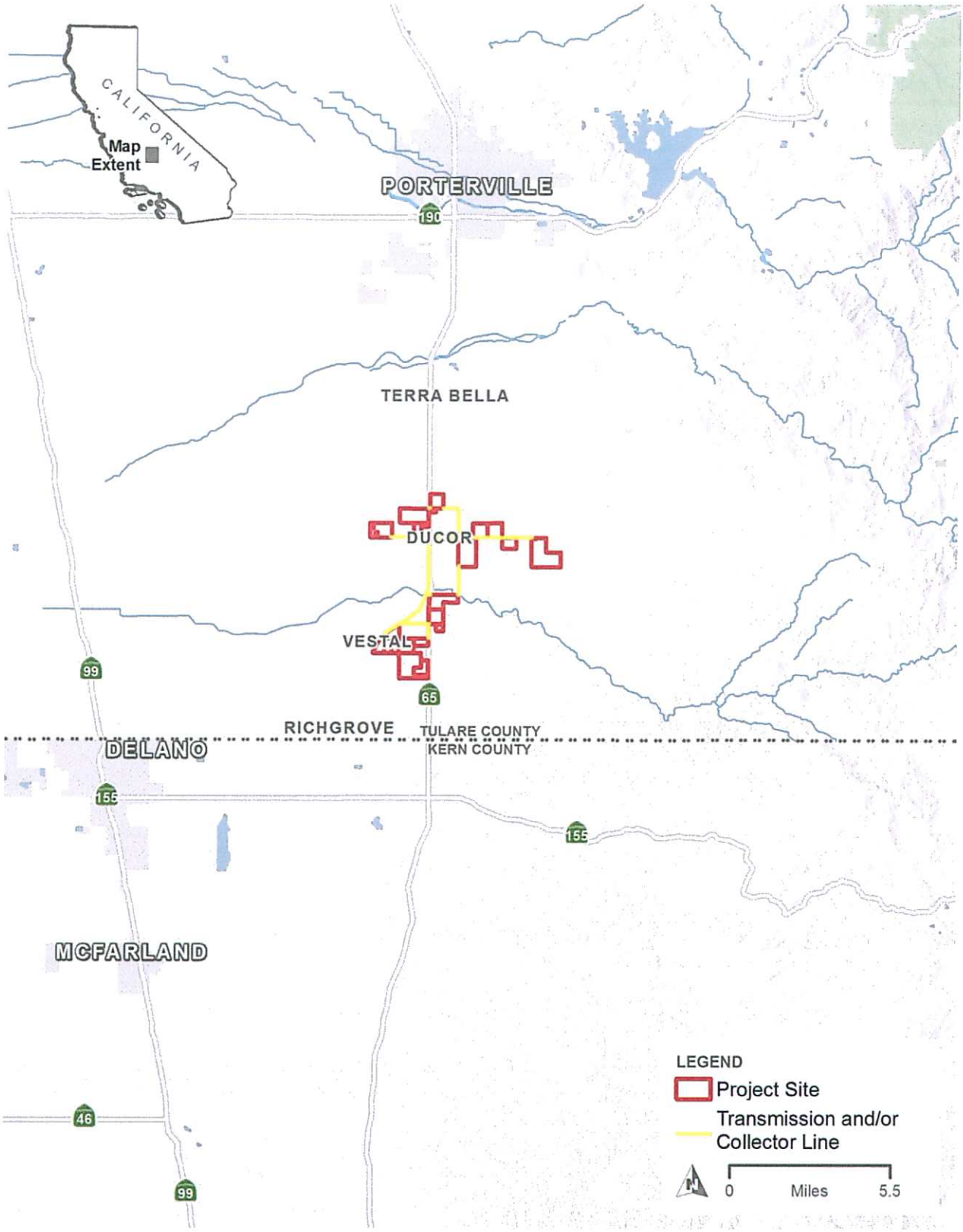

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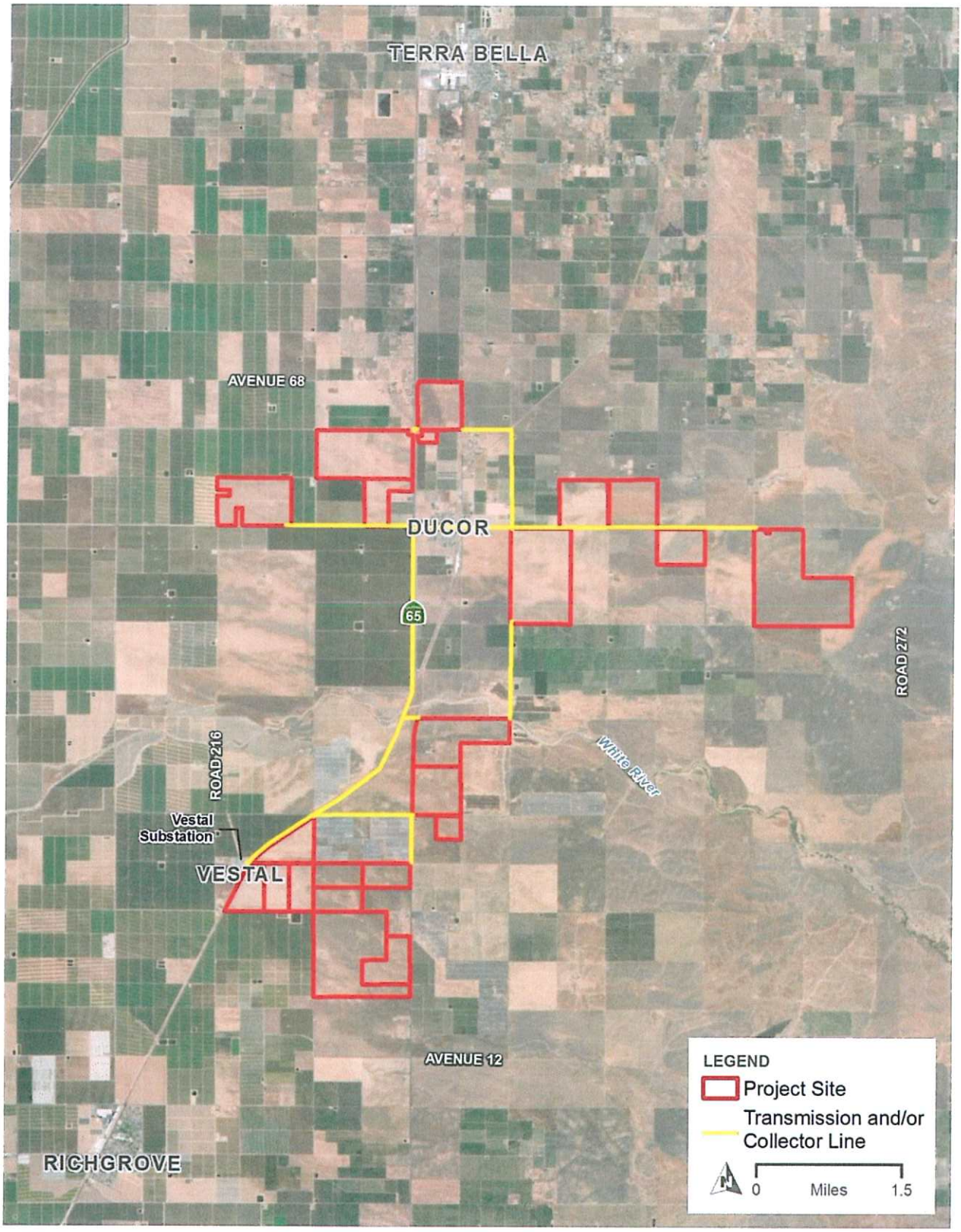

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Leo Sisco
Date: 2/25/2020 4:36 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_SRR-Sisco.pdf

Good afternoon Mr. Sisco.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

Have a wonderful evening.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

RESOURCE MANAGEMENT AGENCY

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VISALIA, CA 93277
PHONE (559) 624-7000
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Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Leo Sisco, Chairperson
Santa Rosa Rancheria Tachi Yokut Tribe
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

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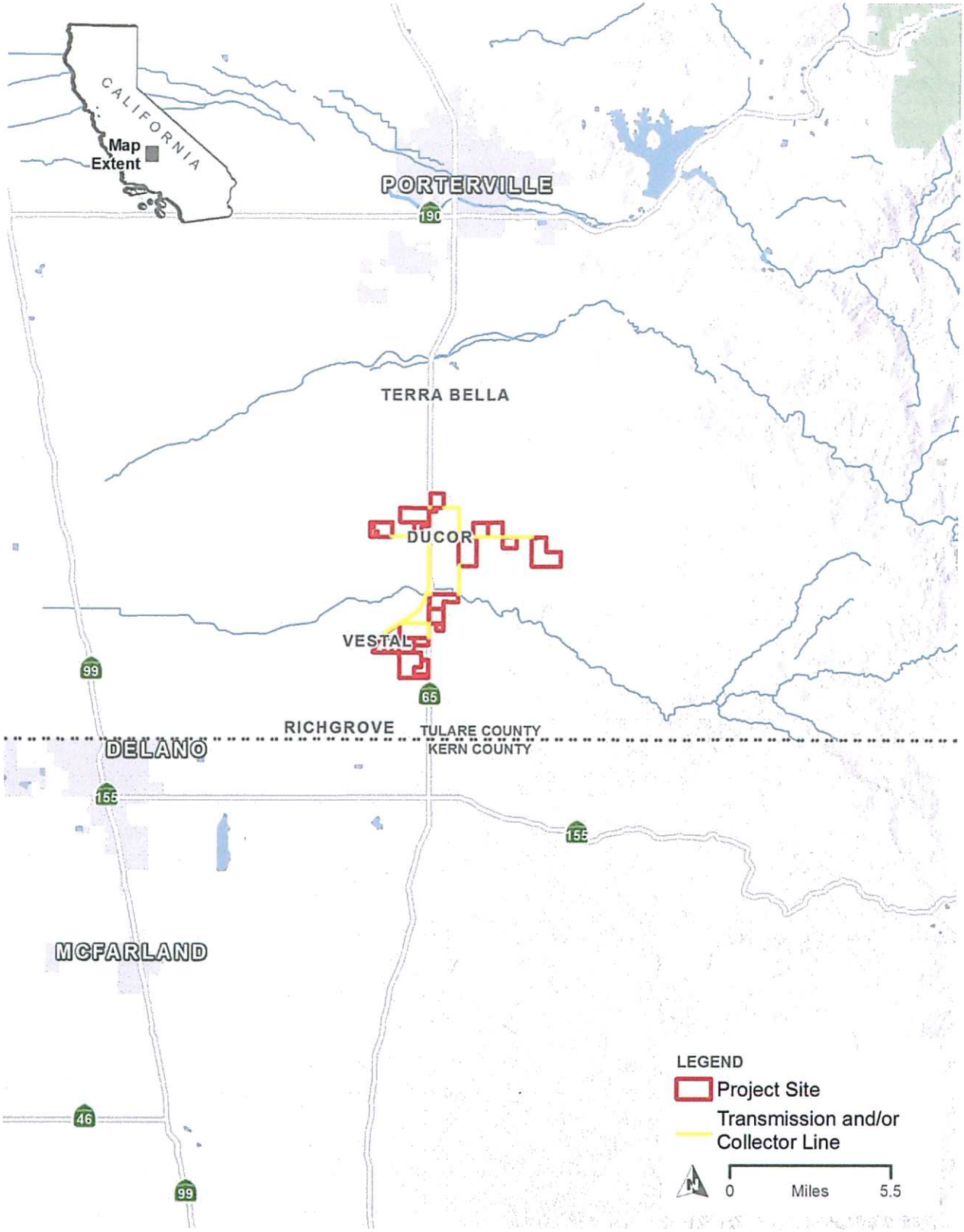

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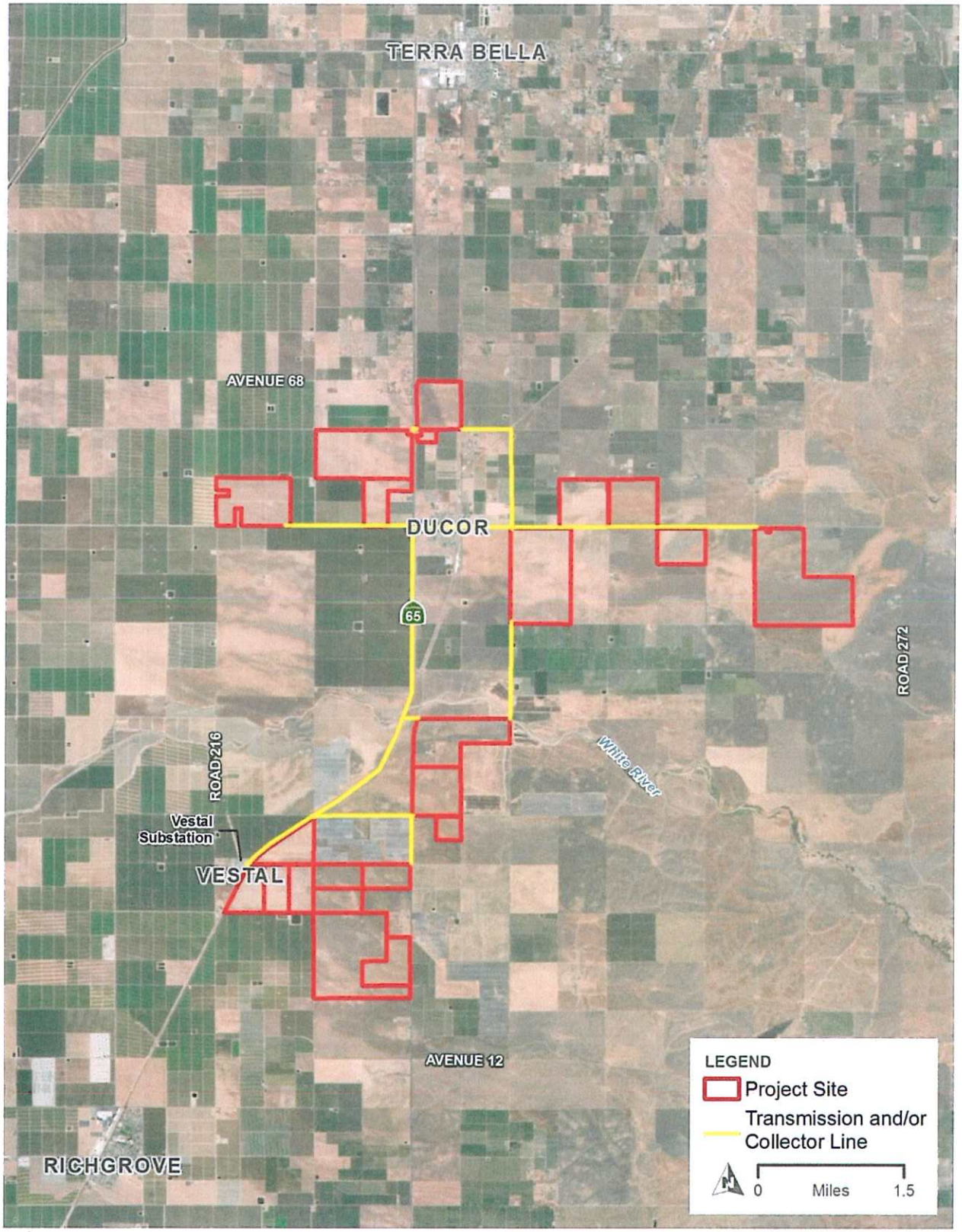

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Felix Christman
Date: 2/25/2020 4:36 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_TRIT-Christman.pdf

Good afternoon Mr. Christman.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. Please note, in response to her request, a copy of the Sacred Land File search and Historical Resource search results have been submitted to Ms. Kerri Vera, of your tribe. Please feel free to call or email me if I can be of further assistance.

Have a wonderful evening.

Jessica Willis
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Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Felix Christman, Archaeological Monitor
Tule River Indian Tribe
Department of Environmental Protection
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

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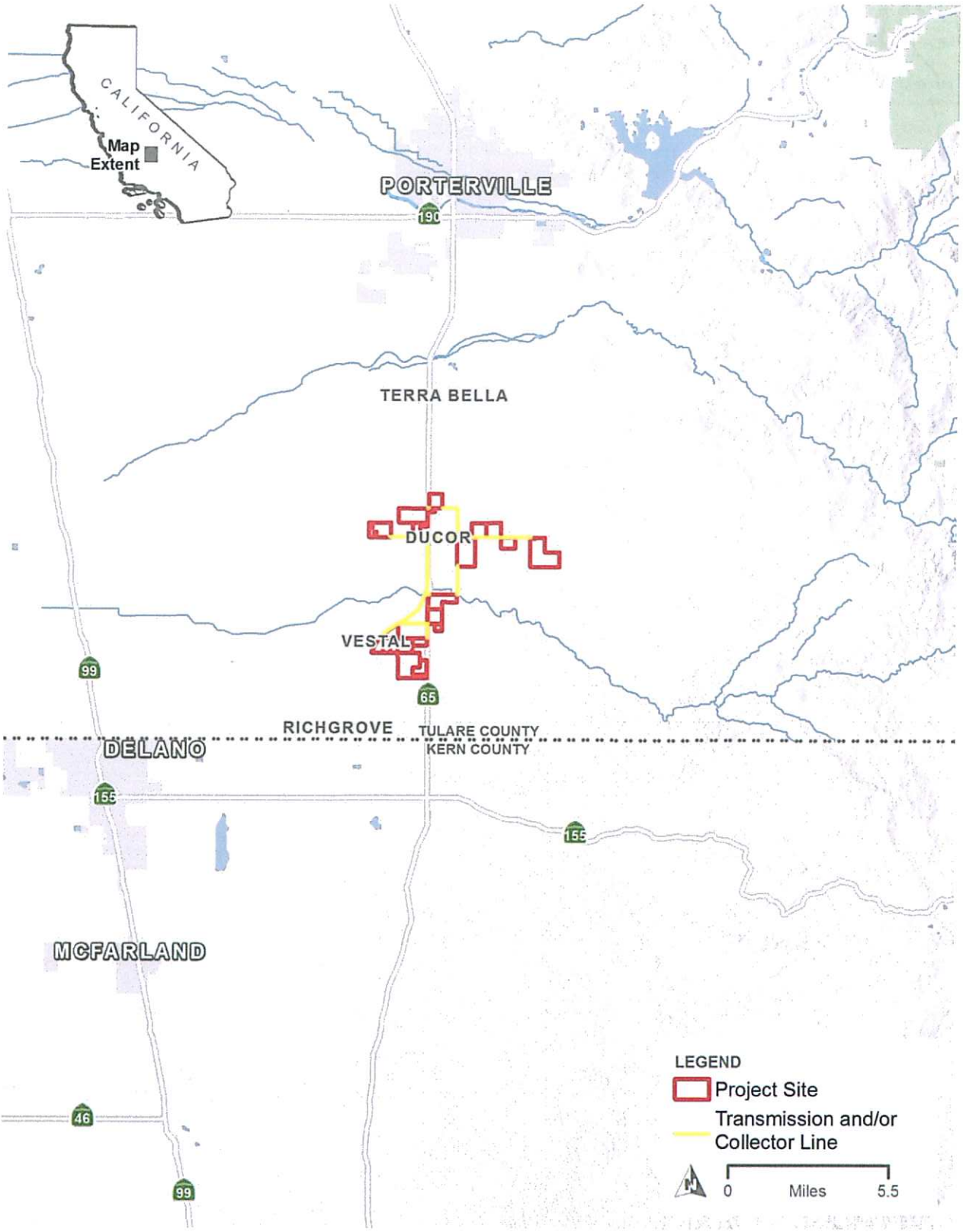

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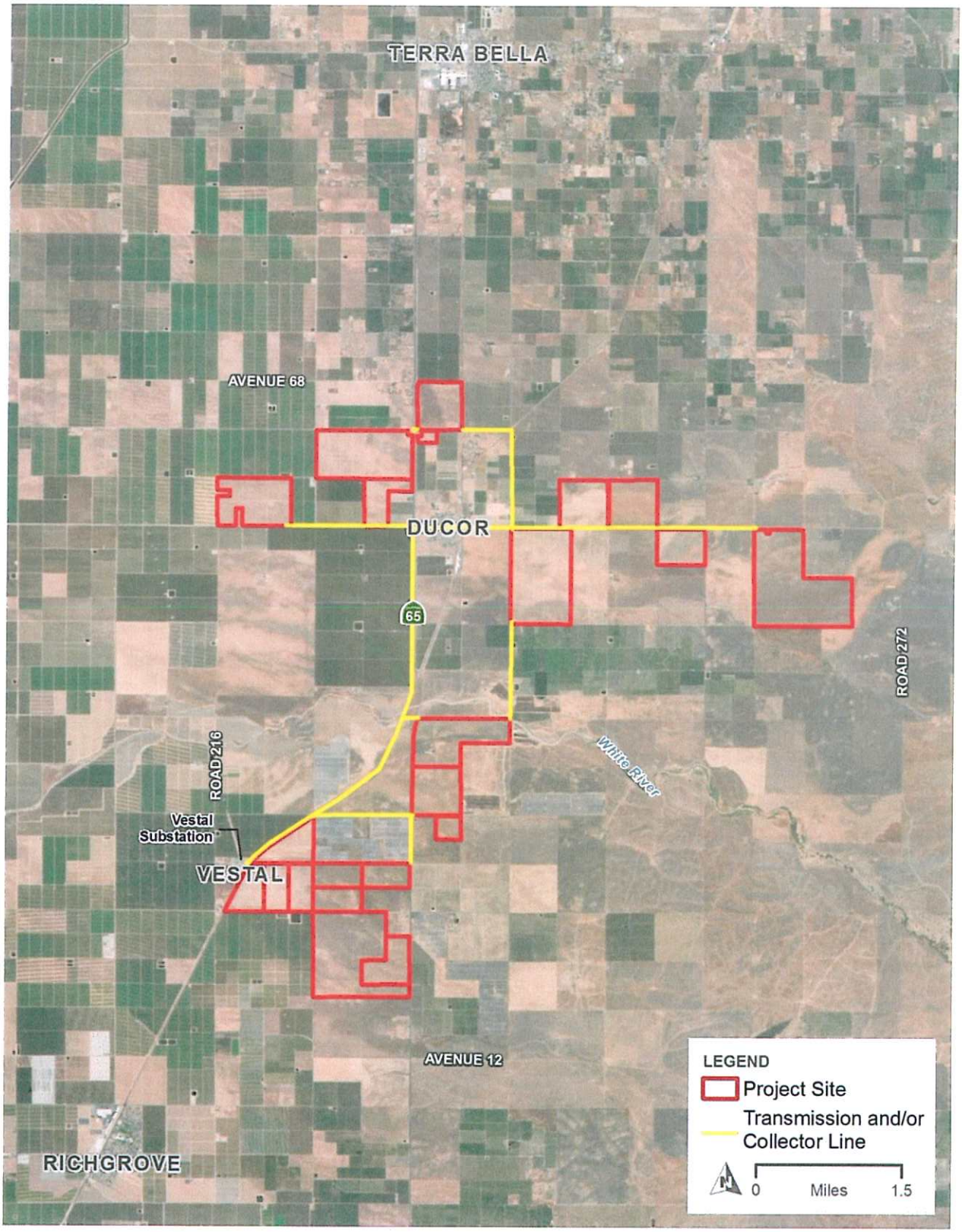

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Neil Peyron
Date: 2/25/2020 4:35 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_TRIT-Peyron.pdf

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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Neil Peyron, Chairperson
Tule River Indian Tribe
P. O. Box 589
Porterville, CA 93258

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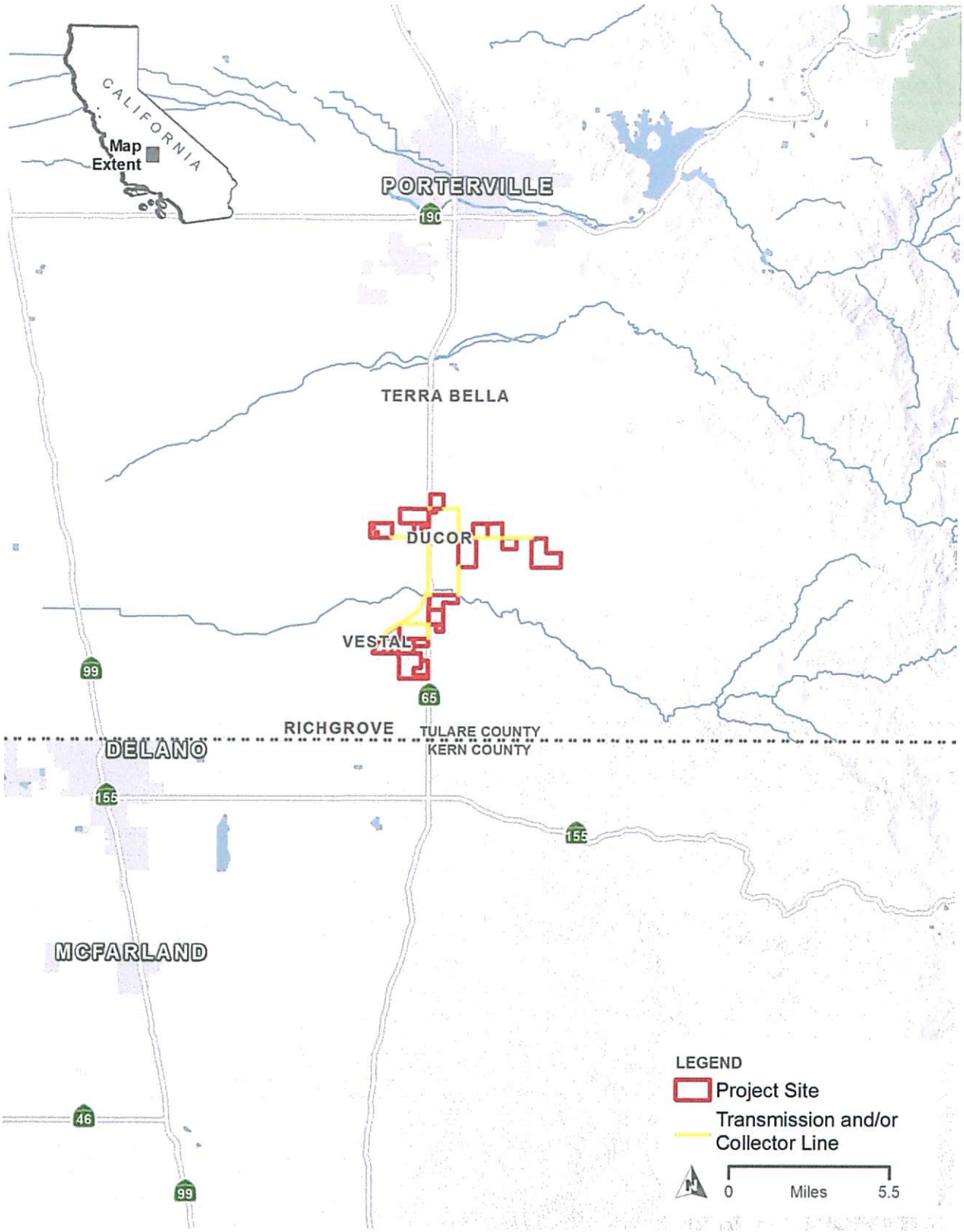

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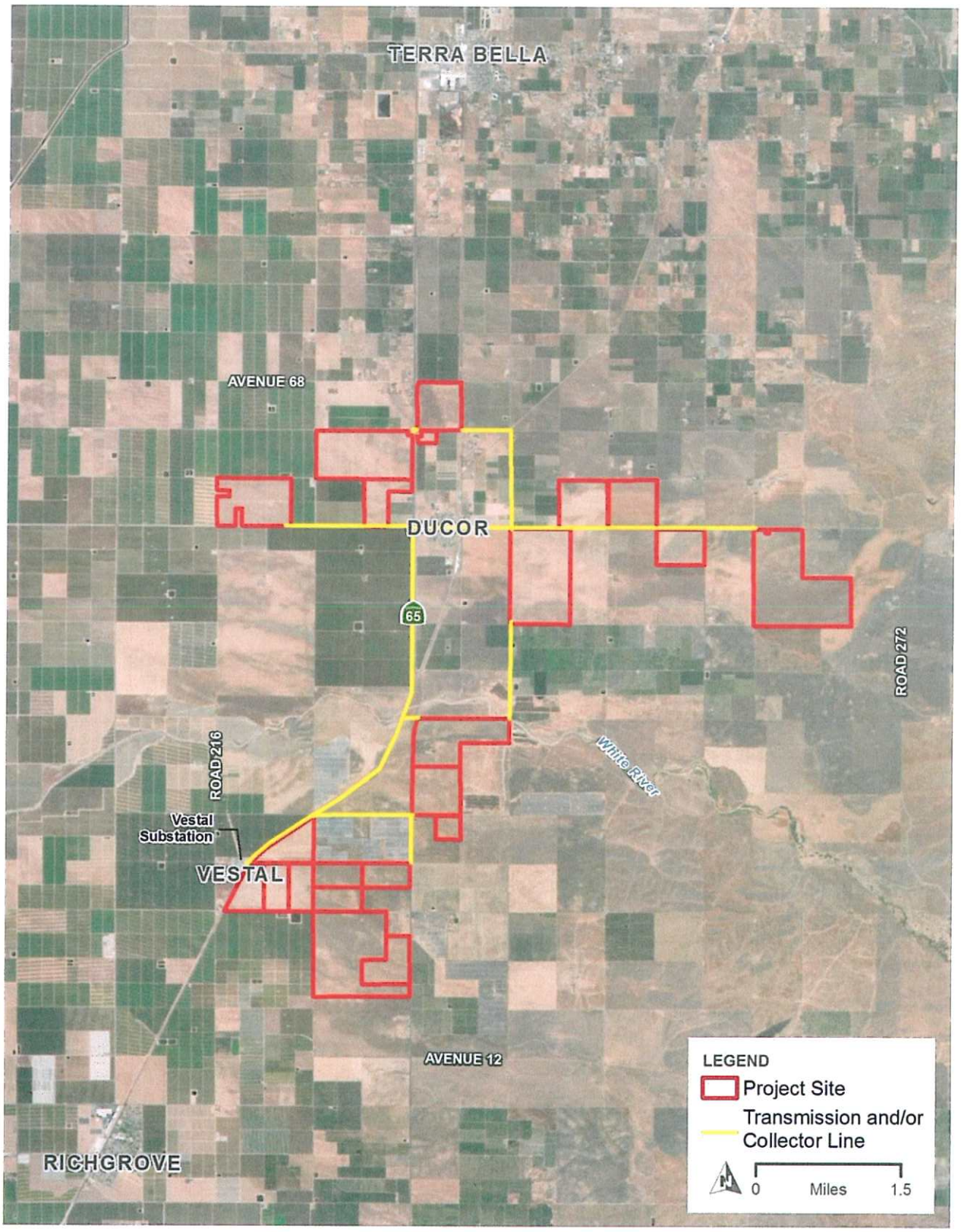

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To: Kerri Vera
Date: 2/25/2020 4:35 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_TRIT-Vera.pdf; Rexford_SLF Request-Vera.pdf; Rexford_CHRIS Records-Vera.pdf

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February 25, 2020

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If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification within 30 days, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Hector Guerra, Chief of Environmental Planning, by phone at (559) 624-7121, or by email at hguerra@co.tulare.ca.us.

Sincerely,

Jessica R Willis

Jessica Willis
Planner IV
(559) 624-7121
JWillis@co.tulare.ca.us

Attachments: Project description
Project location maps
SSJVIC search results
SLF search results

Project Description:

The Project includes the construction and operation of an up to 700 megawatt alternative current (MW AC) solar photovoltaic (PV) facility and an up to 700 MW AC energy storage system (ESS) on approximately 3,614 gross acres of land (on 40 discontiguous parcels) in unincorporated south-central Tulare County, California. The proposed Project would include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, ESS, access roads and fencing, and on-site substation. An operations and maintenance building may be constructed on the site.

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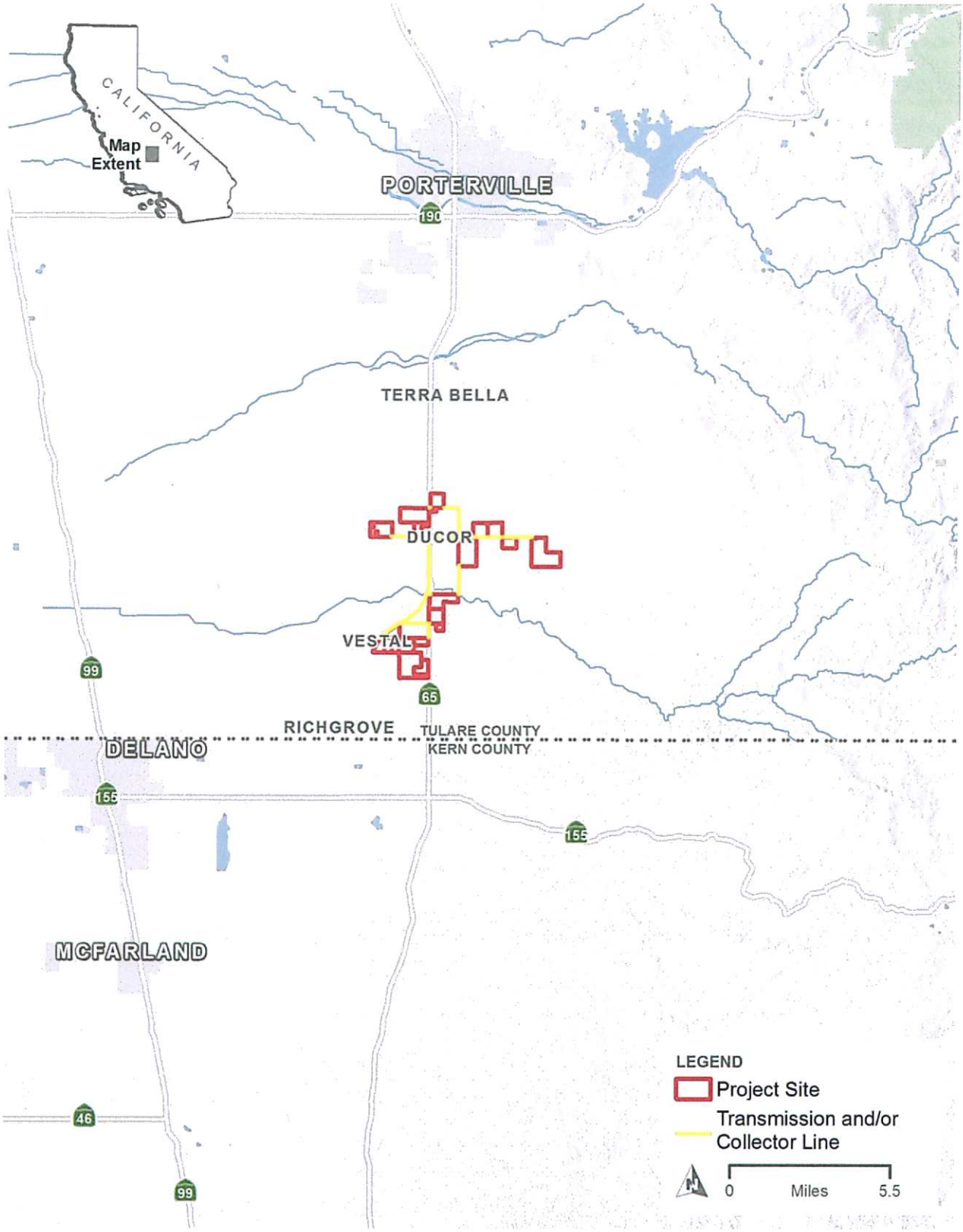
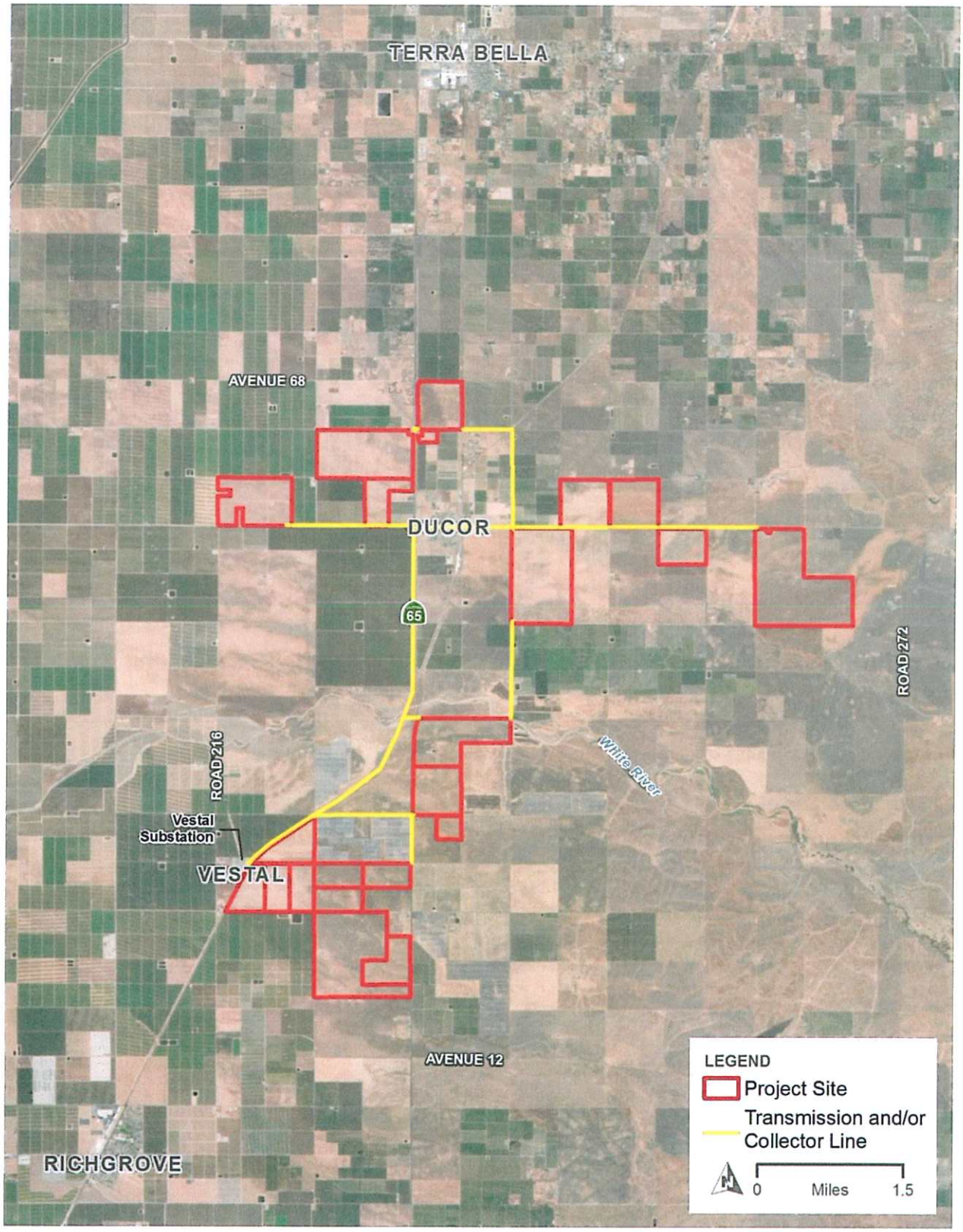


Figure 2. Vicinity Map



Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Robert L. Gomez
Date: 2/25/2020 4:35 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_Tubatulabals.pdf

Good afternoon Mr. Gomez.

Pursuant to AB 52, please find attached the County's Project Notification for the Rexford Solar Farm Project. You should also be receiving the original hard copy via certified mail. If you have no comments or do not wish to consult on this project, an email stating such would be greatly appreciated. Please feel free to call or email me if I can be of further assistance.

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Robert L. Gomez, Jr., Chairperson
Tubatulabals of Kern Valley
P.O. Box 226
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Rexford Solar Farm Project, Special Use Permit PSP 19-073

Dear Chairperson Gomez,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Rexford Solar Farm (PSP 19-073) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) was requested for the Project. The SLF search returned on October 8, 2019, with "negative" results; however, the NAHC recommended consultation with your Tribe. Results of the SLF search will be made available upon the release of the EIR for public review. However, results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

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A records search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC). The records search dated October 1, 2019, indicated that twenty-four (24) reports have been prepared and fifteen (15) recorded resources within the project area or ½ mile radius. As such, a Cultural Resources Study is being prepared for the project site. The study may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

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Project location maps

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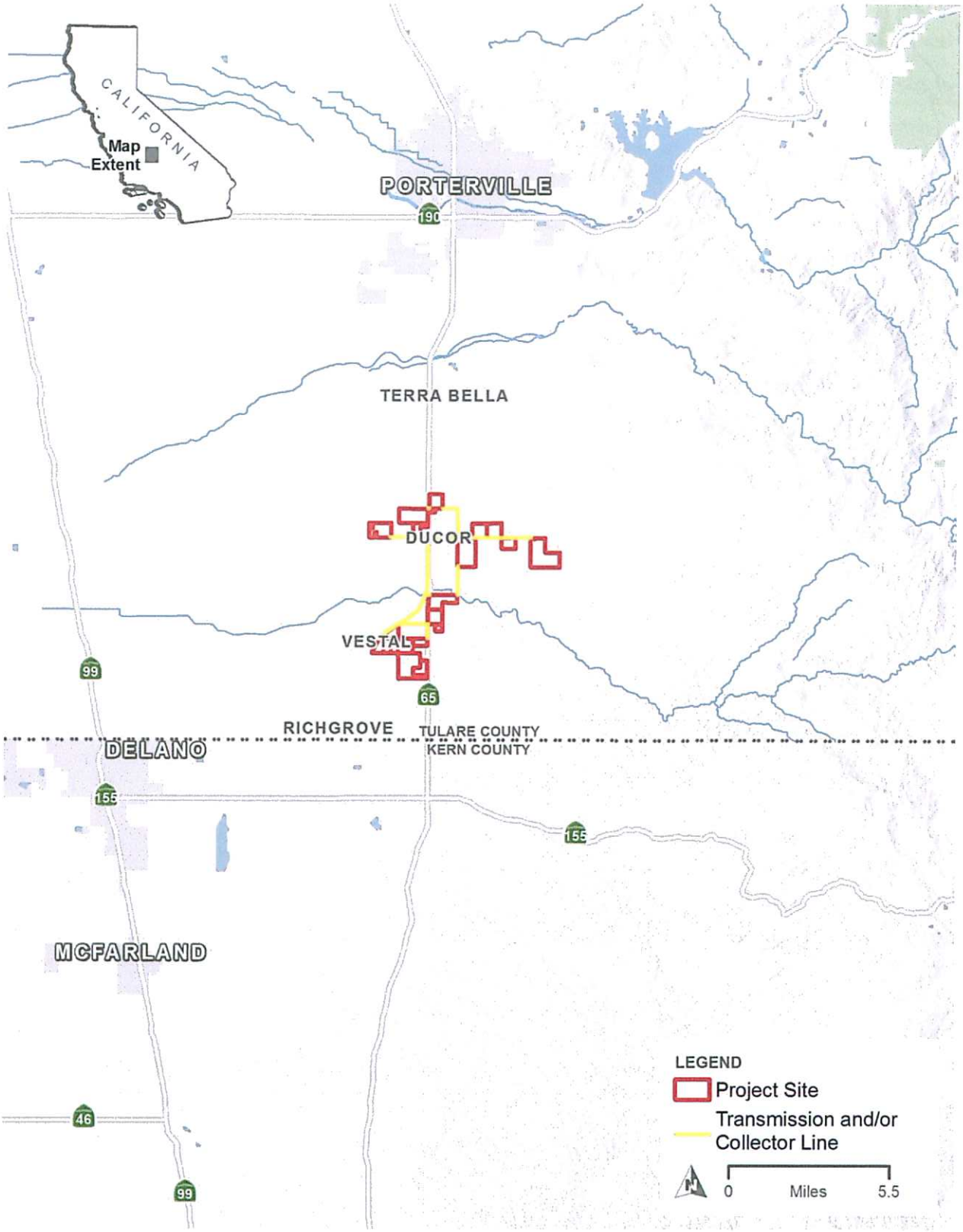

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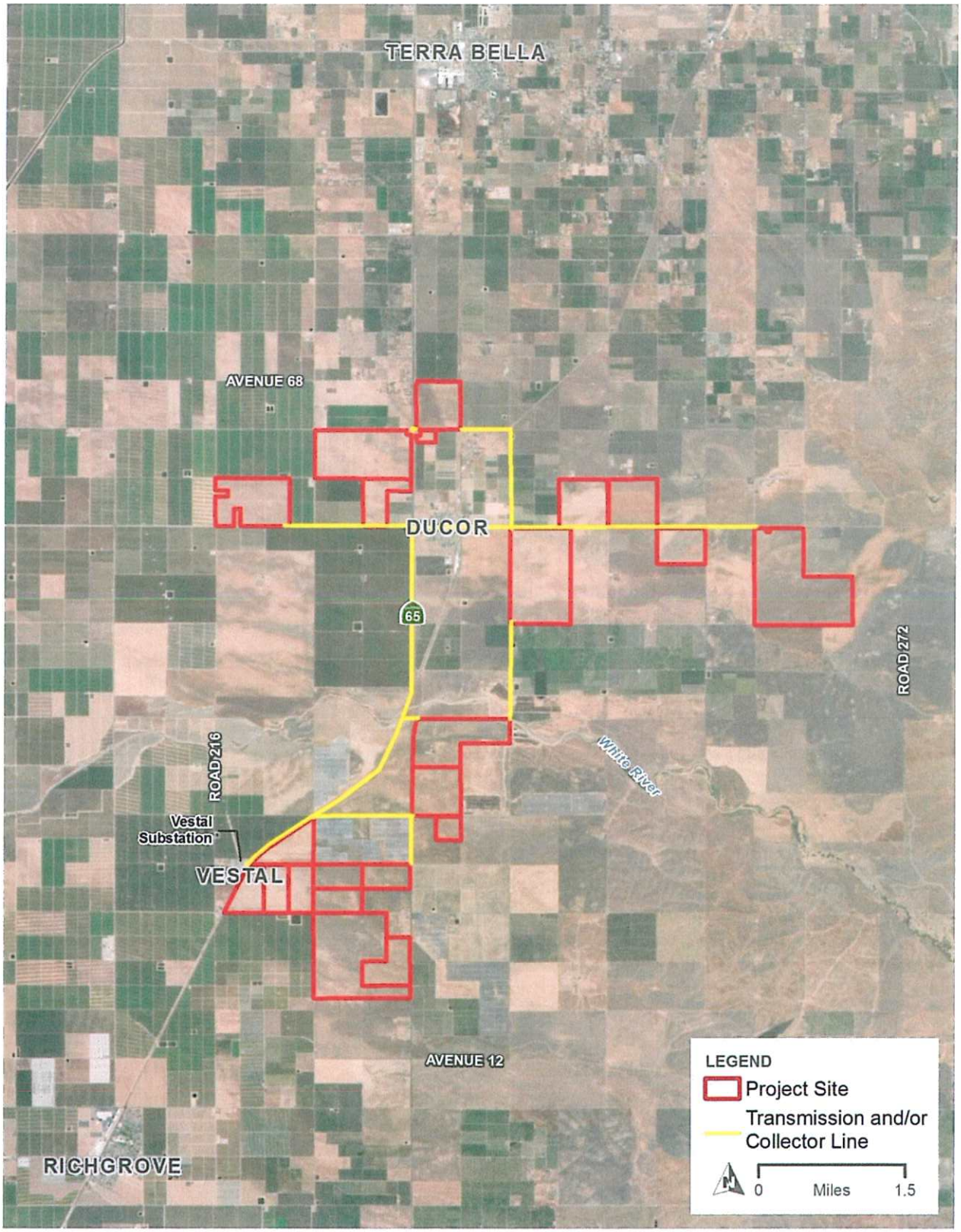

Jessica Willis - AB 52 consultation request for Rexford Solar

From: Jessica Willis
To: Ken Woodrow
Date: 2/25/2020 4:35 PM
Subject: AB 52 consultation request for Rexford Solar
Attachments: Rexford_Consult Request_Wuksache.pdf

Good afternoon Mr. Woodrow.

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Have a wonderful evening.

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County of Tulare
Resource Management Agency
Phone: (559) 624-7122
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Michael Washam — Economic Development and Planning
Reed Schenke — Public Works
Sherman Dix — Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 25, 2020

Kenneth Woodrow, Chairperson
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA 93906

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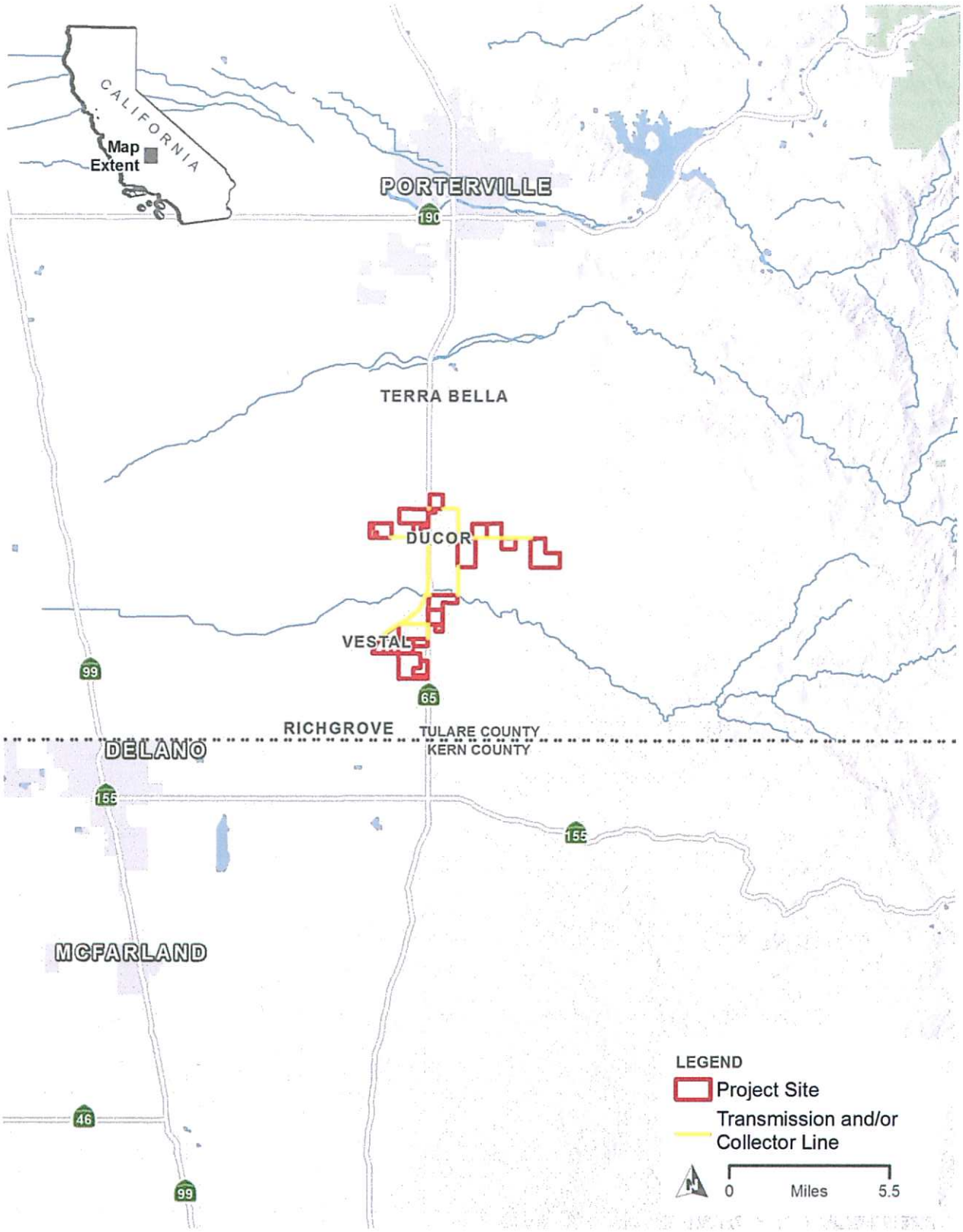

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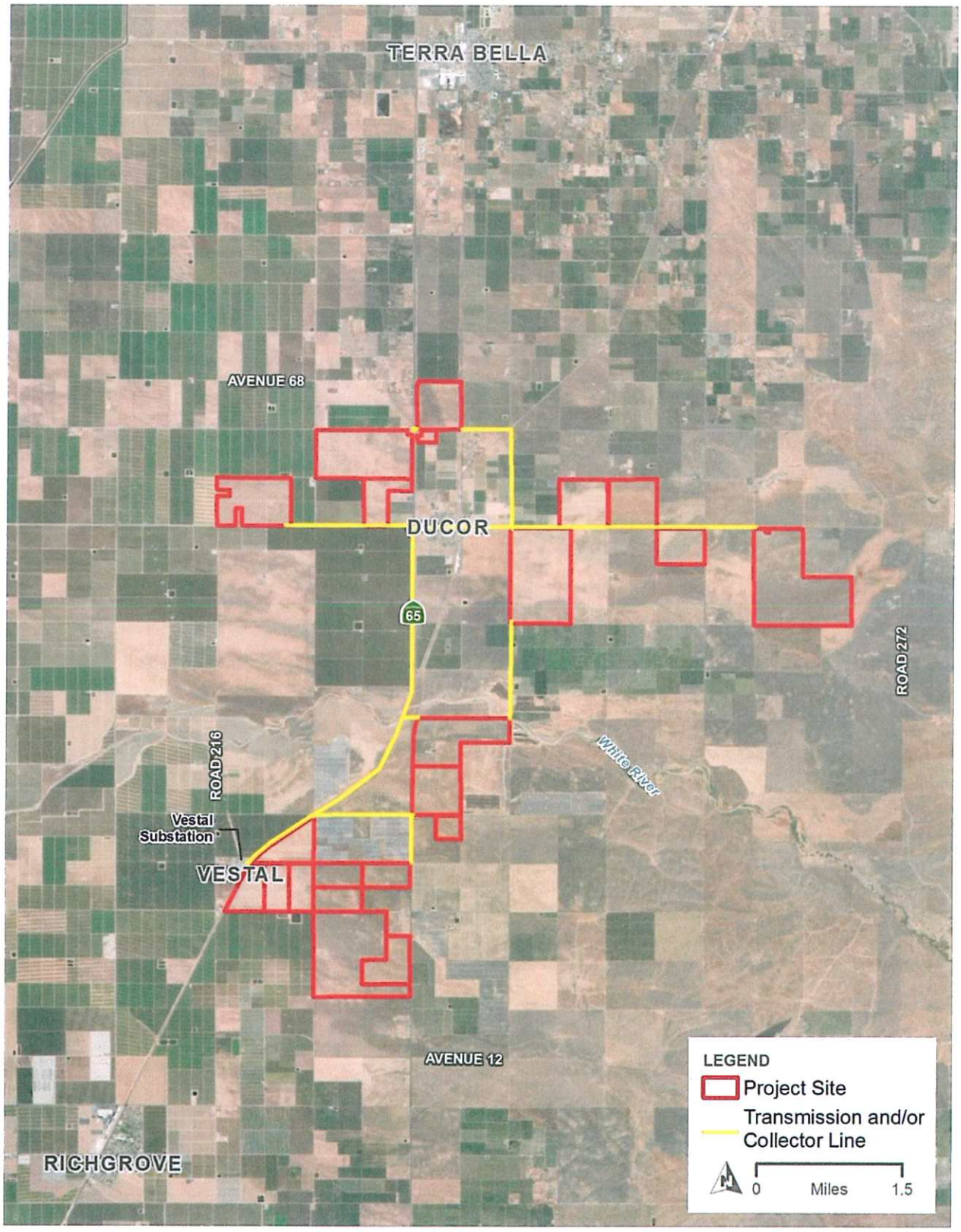

Reply | Reply All | Forward | Move | Mark Unread | Delete | Resend | Print View

Mail Properties

From: **Jessica Willis** Friday - April 10, 2020 7:17 PM
To: **bbutterbredt@gmail.com, krazykendricks@hotmail.com, meindiangirl@sbcglobal.net**
CC: **HGuerra@co.tulare.ca.us**
Subject: **Rexford Solar Farm follow up**
Attachments: Rexford_Project Notification and Consult Request.pdf (637 KB) View

Good evening all.

I would like to follow up regarding the AB 52 consultation process for the Rexford Solar Farm Project. On February 25, 2020, the County of Tulare submitted for your review (via email and certified mail) the attached project description and maps for this Project. As the County has not yet received correspondence from you, I am following up to inquire whether you or your Tribe have any comments, concerns, or recommendations regarding this project.

The County makes every effort to respect the Tribe's confidentiality and the sensitivity of tribal cultural resources while also, simultaneously, complying with state and federal requirements. A response to this email accepting or declining the opportunity to consult with the County would be greatly appreciated.

I look forward to hearing from you.

Jessica Willis
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Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

Reply | Reply All | Forward | Move | Mark Unread | Delete | Resend | Print View

Mail Properties

From: **Jessica Willis** Friday - April 10, 2020 7:18 PM
To: **barias@tachi-yokut-nsn.gov, GCuara@tachi-yokut-nsn.gov, LSisco@tachi-yokut-nsn.gov, RGJeff@tachi-yokut-nsn.gov, SPowers@tachi-yokut-nsn....**
CC: **HGuerra@co.tulare.ca.us**
Subject: **Rexford Solar Farm follow up**

Good evening all.

I would like to follow up regarding the AB 52 consultation process for the Rexford Solar Farm Project. On February 14, 2020, Ms. Powers requested that your Tribe be notified on discoveries, if any, during project-related activities, but that the Tribe would be deferring to the Tule River and Tejon Indian Tribes. The County received an email from the Tejon Tribe that the project is outside of their area and would also be deferring to the Tule River Tribe. The County has taken your recommendations into consideration and your request for notification in the event of discovery will be made a project design feature (as a condition of approval). Also, the Tule River Tribe has been contacted regarding the project and the County has provided them with the requested documentation.

The County makes every effort to respect the Tribe's confidentiality and the sensitivity of tribal cultural resources while also, simultaneously, complying with state and federal requirements.

I look forward to hearing from you.

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Mail Properties

From: **Jessica Willis** Friday - April 10, 2020 7:18 PM
To: **rgomez@tubatulabal.org**
CC: **HGuerra@co.tulare.ca.us**
Subject: **Rexford Solar Farm follow up**
Attachments: Rexford_Project Notification and Consult Request.pdf (637 KB) View

Good evening Mr. Gomez.

I would like to follow up regarding the AB 52 consultation process for the Rexford Solar Farm Project. On February 25, 2020, the County of Tulare submitted for your review (via email and certified mail) the attached project description and maps for this Project. The certified email was to returned to the County as unclaimed and unable to forward; however, the email appears to have transmitted. As the County has not yet received correspondence from you, I am following up to inquire whether you or your Tribe have any comments, concerns, or recommendations regarding this project.

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From: **Jessica Willis** Friday - April 10, 2020 7:18 PM
To: **tuleriverarchmon1@gmail.com, neil.peyron@tulerivertribe-nsn.gov, tuleriverenv@yahoo.com**
CC: **HGuerra@co.tulare.ca.us**
Subject: **Rexford Solar Farm follow up**
Attachments: RexfordCR Report_480AcreUpdate_02032020.pdf (10.99 MB)

Good evening all.

I would like to follow up regarding the AB 52 consultation process for the Rexford Solar Farm Project. On February 18, 2020, Ms. Vera requested consultation with the County for this Project. Per Ms. Vera's request, on February 25, 2020, the County of Tulare submitted for your review the California Historical Records Information Search (CHRIS) results and the Sacred Lands File (SLF) search. Per that request, the County is now submitting for your review a copy of the draft Cultural Resources Assessment Report.

Please note, the County makes every effort to respect the Tribe's confidentiality and the sensitivity of tribal cultural resources while also, simultaneously, complying with state and federal requirements.

I look forward to hearing from you.

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APPENDIX E.2
CULTURAL RESOURCES ASSESSMENT

CULTURAL RESOURCES ASSESSMENT

This report contains confidential information exempt from public disclosure pursuant to:

54 USC § 307103 (National Historic Preservation Act), and/or

16 USC § 470hh (Archaeological Resources Protection Act), and/or

16 USC § 470aaa (Paleontological Resources Preservation Act), and/or

36 CFR § 296.18 (Confidentiality of Archaeological Resource Information), and/or

Gov. Code § 6254(r): California Public Records, Records exempt from disclosure requirements, Native American grave, cemetery and sacred place records, and/or

Gov. Code § 6254.10: California Public Records Act, Disclosure of records relating to archaeological site information and specified reports not required, and/or

14 CCR §15120(d): CEQA Guidelines, Contents of Environmental Impact Reports.

APPENDIX F
CEQA LEVEL GEOTECHNICAL STUDY

CEQA Level Geotechnical Study

Tulare County, California

January 13, 2020

Prepared for:

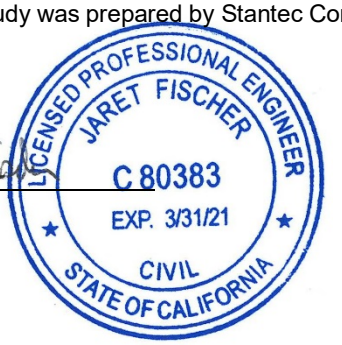
20SD 8ME LLC
c/o 8minute Solar Energy
5455 Wilshire Boulevard, Suite 2010
Los Angeles, CA 90036

Prepared by:

Stantec Consulting Services Inc.

This document entitled CEQA Level Geotechnical Study was prepared by Stantec Consulting Services Inc. (“Stantec”) for the account of 20SD 8ME LLC (the “Client”).

Prepared by _____ (signature)



Jaret Fischer, PE

Principal Engineer

Reviewed by _____ (signature)

Evan Hsiao, PE, GE

Principal, Senior Geotechnical Engineer

Reviewed by _____ (signature)

Caitlin Barns

Senior Biologist, Project Manager

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Acronyms and Abbreviations

AC	alternating electrical current
Applicant	20SD 8me LLC
ASTM	ASTM International
CAL	California
CDMG	California Department of Conservation, Department of Mines and Geology
CEQA	California Environmental Quality Act
CO_2e	Carbon dioxide equivalent
CUP	Conditional Use Permit
CGS	California Geological Survey
Client	20SD 8me LLC
DC	direct electrical current
DWR	California Department of Water Resources
ESS	Energy Storage System
g	acceleration due to gravity
gen-tie	generation tie
ISO	International Organization for Standardization
kV	kilovolt
MW	megawatt
MWh	megawatt-hour
O&M	operations and maintenance
Project	Rexford Solar Farm Project
PV	photovoltaic
SCE	Southern California Edison
Stantec	Stantec Consulting Services Inc.
USCS	Unified Soil Classification System
USGS	U.S. Geological Survey

Executive Summary

Stantec Consulting Services Inc. (Stantec) has prepared this California Environmental Quality Act (CEQA) Level Geotechnical Study for the proposed Rexford Solar Farm Project (Project), located near Ducor in Tulare County, California. 20SD 8me LLC (the Applicant) is seeking approval of a Conditional Use Permit (CUP) for the construction and operation of an up to 700 megawatts (MW) of alternating current (AC) power, and up 700 MW-AC of storage capacity. The Project is comprised of 40 assessor's parcels (Project Area) totaling approximately 3,620 gross acres.

This geotechnical investigation outlines subsurface information for the Project area, describes methods undertaken to excavate and sample test pits and perform soil mechanics laboratory testing on select soil samples, and presents results of Stantec's evaluations of the geotechnical properties of soils pertinent to the CEQA Guidelines and recommended mitigation.

Thirteen shallow soil borings (B1 through B5 and B7 through B14) were advanced at selected locations throughout the site to at most 10 feet deep (Figures 2 and 3). Relatively undisturbed samples were obtained using a modified California (CAL) sampler, which is a ring-lined split tube sampler with a 3-inch outer diameter and 2.5-inch inner diameter. CAL sampling followed ASTM International (ASTM) D3550 (Standard Practice for Ring-Lined Barrel Sampling of Soils) procedures. Disturbed bulk samples were also obtained from the drill cuttings. Samples were classified in the field using the Unified Soil Classification System (USCS), in accordance with ASTM D2488 (Standard Practice for Description and Identification of Soils [Visual-Manual Method]) procedures. The laboratory testing confirmed or modified field classifications for presentation on the boring logs.

The near-surface soils encountered in the test pits are sand with variable amounts of clay (SP and SC USCS soil type) clay silt with variable amounts of sand (CL USCS soil type). Near-surface sandy soil was medium dense to very dense and generally dry to the maximum depth of exploration. Groundwater was not encountered during this investigation, but groundwater data from an offsite groundwater production well located approximately 1.1 miles northwest to 4.4 miles southwest of the site, groundwater is expected to be encountered at a depth of approximately 480 feet below the ground surface (bgs) and flows to the west (DWR, 2019).

The Project site is not located within currently a mapped Alquist-Priolo Special Studies Fault Zone, California Liquefaction Hazard Zone, or subsidence area, and is not located near free faces, steep slopes, or bodies of water. Therefore, the following geologic hazards are considered to be low-risk: fault rupture, liquefaction-related ground failure including liquefaction, lateral spreading, subsidence, presence of expansive soils, and landslides. However, the predominately coarse-grained soils underlying the site are potentially susceptible to erosion or the loss of topsoil due to surface water flows. In addition, strong ground shaking can be expected at the site during moderate to severe earthquakes in the general region. This is common to most areas in central California.

Mitigation of soil erosion may include selective grading, establishment of anchoring vegetation, design of runoff control features such as drainage ditches, and construction of erosion control features such as pavements and surface mats. These mitigation options should be addressed in the design level evaluations for the Project.

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has prepared this California Environmental Quality Act (CEQA) Level Geotechnical Study to provide support documentation for the Environmental Checklist Form in accordance with the CEQA Guidelines for the proposed Rexford Solar Farm, located near Ducor in Tulare County, California.

1.2 PROJECT INFORMATION

20SD 8me LLC (the Applicant) is seeking approval of a Conditional Use Permit (CUP) for the construction and operation of an up to 700 megawatt-alternating current (MW-AC) utility-scale solar farm with energy storage, known as the Rexford Solar Farm ("Rexford" or the "Project") in unincorporated Tulare County, California (Figure 1). The Applicant proposes to construct, own, and operate the Project and would secure Conditional Use Permits from Tulare County as the lead agency, along with permits from other relevant agencies as required by law.

1.2.1 Project Site Information

The Project is comprised of 40 assessor's parcels (Project Area) totaling approximately 3,620 gross acres. The permanent disturbance acreage associated with development of the solar facility and associated infrastructure (Project Site) within the Project Area would be less than the gross acreage of the Project Area. The topography of the Project Area is relatively flat.

1.2.2 Location

The Project Area is located in unincorporated Tulare County. The majority of the Project is bisected by State Route 65.

Table 1. Rexford Parcels

No.	APN*	Acres
1	339-110-001	395
2	339-050-006	80
3	339-050-007	38.5
4	339-050-008	38.5
5	339-050-013	188.43
6	339-050-004	40
7	321-140-007	20
8	321-140-008	5
9	321-140-014	20
10	321-140-010	5
11	321-140-012	7.2

No.	APN*	Acres
12	321-140-013	9.4
13	321-140-015	157.48
14	321-120-002	160
15	321-120-004	155.89
16	321-130-005	99.7
17	321-040-011	13.66
18	321-040-025	32.63
19	321-040-008	75.5
20	321-040-007	18.44
21	321-110-016	14.67
22	339-110-008	76
23	339-110-009	40
24	339-080-016	80
25	339-080-005	40
26	339-080-013	80
27	339-080-015	80
28	339-070-014	88
29	339-070-015	80
30	339-070-016	80
31	321-200-006	200
32	321-190-001	160
33	321-190-002	40
34	321-210-004	116
35	339-070 026	106.8
36	321-070-014	156.7
37	321-070-026	156.4
38	323-040-006	160.47
39	323-040-008	160.8
40	323-040-007	157.7
	Total	3,619.97

Note:
APN = Assessor Parcel Number

1.3 DESCRIPTION OF PROPOSED PROJECT

The Applicant proposes to develop a photovoltaic (PV) energy facility and energy storage system (ESS) within the Project Area that is capable of producing up to 700 megawatts (MW) of alternating current (AC) power, and up 700

MW-AC of storage capacity. Power generated by the Project would be collected using up to 230 kV collector lines which run overhead and/or underground to a dedicated project substation, and would then connect to the Southern California Edison (SCE) Vestal Substation (Vestal) via an overhead and/or underground generation tie lie (gen-tie line).

The Project may construct an operations & maintenance (O&M) building and/or transmission facilities, as necessary, or may share an O&M building and/or transmission facilities with one or more nearby or future solar projects, and/or may be remotely operated. Any unused O&M building, substation, and/or transmission facility areas noted on the site plan may be covered by solar panels or an energy storage system under such scenarios.

After the useful life of the Project, the panels would be disassembled from the mounting frames and the Project Site would be restored to its pre-development condition.

1.3.1 PV Module Configuration

The Project would use PV panels or modules on mounting frameworks to convert sunlight directly into electricity. Individual panels would be installed on either fixed-tilt or tracker mount systems (single- or dual- axis, using galvanized steel or aluminum). If the panels are configured for fixed tilt, they would be oriented toward the south. For tracking configurations, the panels would rotate to follow the sun over the course of the day. Although the panels could stand up to 20 feet high, depending on the mounting system used and on County building codes, panels are expected to remain between 6 and 8 feet high.

The solar panel array would be arranged in groups called blocks, with inverter stations generally located centrally within the blocks. Blocks would produce direct electrical current (DC), which is converted to AC at the inverter stations.

Each PV module would be placed on a fixed-tilt or tracker mounting structure. The foundations for the mounting structures can extend up to 10 feet below ground, depending on the structure, soil conditions, and wind loads, and may be encased in concrete or use small concrete footings. A light-colored ground cover or palliative may be used to increase electricity production. Final solar panel layout and spacing would be optimized for Project Area characteristics and the desired energy production profile.

1.3.2 Inverter Stations

DC energy is delivered from the panels via cable to inverter stations, generally located near the center of each block. Inverter stations convert the DC energy to AC energy which can be dispatched to the transmission system. Inverter stations are typically comprised of one or more inverter modules with a rated power of up to 5 MW each, a unit transformer, and voltage switch gear. The unit transformer and voltage switch gear are housed in steel enclosures, while the inverter module(s) are housed in cabinets. Depending on the vendor selected, the inverter station may lie within an enclosed or canopied metal structure, typically on a skid or concrete mounted pad.

1.3.3 Energy Storage System

The Project may include one or more ESS, located at or near a substation/switchyard (onsite or shared) and/or at the inverter stations, or elsewhere onsite. Such large-scale ESSs would be up to 700 MWac in capacity and up to 25

acres in total area. ESSs consist of modular and scalable battery packs and battery control systems that conform to U.S. national safety standards. The ESS modules, which could include commercially available lithium or flow batteries, typically consist of ISO standard containers (approximately 40'L x 8'W x 8'H) housed in pad- or post-mounted, stackable metal structures, but may also be housed in a dedicated building(s) in compliance with applicable regulations. The maximum height of a dedicated structure is not expected to exceed 25 feet. The actual dimensions and number of energy storage modules and structures vary depending on the application, supplier, and configuration chosen, as well as on offtaker/power purchase agreement requirements and on County building standards. The Project may share an ESS with one or more nearby or future solar projects or may operate one or more standalone ESS facilities within the Project Site.

1.3.4 Substation

Output from the inverter stations would be transferred via electrical conduits and electrical conductor wires to one or more project substations or switchyards (collectively referred to as "substations" herein), and then onward via an up to 230kV dedicated gen-tie line to the SCE Vestal Substation. The Project and any associated ESS would have their own dedicated substation equipment located either within the Project Site. Dedicated equipment may incorporate several components, including auxiliary power transformers, distribution cabinets, revenue metering systems, a microwave transmission tower, and voltage switch gear. Each substation would occupy an area of up to approximately five acres, secured separately by a chain-link fence. The final location(s) of each component would be determined before the issuance of building permits.

Substations typically include a small control building (roughly 500 square feet) standing approximately 10 feet tall. The building is either prefabricated concrete or steel housing with rooms for the voltage switch gear and the metering equipment, a room for the station supply transformer, and a separate control technology room in which the main computer, the intrusion detection system, and the main distribution equipment are housed. Components of this building (e.g., control technology room and intrusion detection system) may instead be located at an O&M building described later in this document.

1.3.5 Transmission Line

Power generated by the Project would be transmitted to the SCE Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line. A franchise and/or encroachment agreement along public roads may ultimately be required for portions of the transmission line.

1.3.6 Water Usage

Water demand for panel washing and O&M domestic use is not expected to exceed 50 acre-feet per year. Water usage during construction, primarily for dust-suppression purposes, is not expected to exceed 400 acre-feet. It is anticipated that water would be obtained from existing on-site wells. Alternatively, water may be obtained from one or more off-site source(s) and delivered to the Project via truck. If off-site water is used, it would likely be obtained from one of the nearby solar projects or from a commercial source. A small water treatment system may be installed to provide deionized water for panel washing.

1.3.7 Water Storage Tank(s)

One or more above-ground water storage tanks with a total capacity of up to 50,000 gallons may be placed on-site near the O&M building. The storage tank(s) near the O&M building would have the appropriate fire department connections to be used for fire suppression purposes.

1.3.8 Operations and Maintenance Building

The Project may include an O&M building of approximately 40' x 80' in size, with associated on-site parking. The O&M building would be steel framed, with metal siding and roof panels. The O&M building may include the following:

1. Office
2. Repair building/parts storage
3. Control room
4. Restroom
5. Septic tank and leach field

Roads, driveways and parking lot entrances would be constructed in accordance with Tulare County improvement standards. Parking spaces and walkways would be constructed in conformance with all California Accessibility Regulations.

As noted earlier, the Project may share O&M facilities and/or staff with one or more nearby or future solar projects, and/or may be remotely operated. Any unused O&M areas on-site may be covered by solar panels.

1.3.9 Project Site Security and Fencing

The Project Site would be enclosed within a chain link fence with barbed wire measuring up to eight feet in height from finished grade. An intrusion alarm system comprised of sensor cables integrated into the perimeter fence, intrusion detection cabinets placed approximately every 1,500 feet along the perimeter fence, and an intrusions control unit, located either in the substation control room or at the O&M building, or similar technology, may be installed. Additionally, the Project may include additional security measures including, but not limited to, barbed wire, low voltage fencing with warning reflective signage, controlled access points, security alarms, security camera systems, and security guard vehicle patrols to deter trespassing and/or unauthorized activities that could interfere with operation of the Project.

Controlled access gates would be maintained at the main entrances to the Project Site. Project Site access would be provided to offsite emergency response teams that respond in the event of an after-hours emergency. Enclosure gates would be manually operated with a key provided in an identified key box location.

1.3.10 Project Site Lighting

Project Site lighting would be directed away from public rights-of-way. Lighting used on-site would be minimal. Site lighting may include motion sensor lights for security purposes. Lighting used on-site would be of the lowest intensity foot candle level, in compliance with any applicable regulations, measured at the property line after dark.

1.4 CONSTRUCTION ACTIVITIES

The construction period for the Project, from site preparation through construction, testing, and commercial operation, is expected to commence as early as Q4 2021 and would extend for approximately 12 to 24 months.

Construction of the facility would include the following activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Collector line installation
- Architecture and landscaping

No roadways would be affected by the Project, except during the construction period. Construction vehicles would primarily access the Site from State Route 65 and may also utilize county roads. It is estimated that up to 1,000 workers per day (during peak construction periods) would be required during the construction of the Project.

Heavy construction is expected to occur between 6:00 am and 5:00 pm, Monday through Friday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. Some activities may continue 24 hours per day, seven days per week. Low level noise activities may potentially occur between the hours of 10:00 pm and 7:00 am. Nighttime activities could potentially include, but are not limited to, refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning.

Materials and supplies would be delivered to the Project Area by truck. Truck deliveries would normally and primarily occur during daylight hours. However, there would be offloading and/or transporting to the Project Area on weekends and during evening hours.

Earthmoving activities are expected to be limited to the construction of the access roads, O&M building, substation, ESS(s), and any storm water protection or storage (detention) facilities. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas to control dust and increase albedo of the ground.

1.5 WORK FORCE

Once the Project is constructed, maintenance would generally be limited to the following:

1. Cleaning of PV panels
2. Monitoring electricity generation
3. Providing site security
4. Facility maintenance: replacing or repairing inverters, wiring, and PV modules

It is expected that the Project would require an operational staff of up to 20 full-time employees. As noted earlier, it is possible that the Project would share O&M, substation, ESS, and/or transmission facilities with any future energy

projects nearby. In such a scenario, the projects would share personnel, thereby potentially reducing the Project's onsite staff.

The facility would operate seven days a week, 24 hours a day, generating electricity during normal daylight hours when the solar energy is available. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available.

1.6 PROJECT FEATURES AND BEST MANAGEMENT PRACTICES

The following sections describe standard Project features and best management practices that would be applied during construction and long-term operation of the Project to maintain safety and minimize or avoid environmental impact.

1.6.1 Waste and Hazardous Materials Management

The Project would have minimal levels of materials onsite that have been defined as hazardous under 40 Code of Federal Regulations, Part 261. The following materials are expected to be used during the construction, operation, and long- term maintenance of the Project:

- Insulating oil: used for electrical equipment
- Lubricating oil: used for maintenance vehicles
- Various solvents and detergents: equipment cleaning
- Gasoline: used for maintenance vehicles

Hazardous materials and wastes would be managed, used, handled, stored, and transported in accordance with applicable local and state regulations. All hazardous wastes would be maintained at quantities below the threshold requiring a Hazardous Material Management Program: one 55-gallon drum. Though not expected, should any onsite storage of hazardous materials exceed one 55-gallon drum, a Hazardous Material Management Program would be prepared and implemented.

1.6.2 Spill Prevention and Containment

Less than 55 gallons of hazardous materials would be stored onsite. Spill prevention and containment for construction and operation of the Project would adhere to the Environmental Protection Agency's guidance on Spill Prevention Control and Countermeasures.

1.6.3 Wastewater/Septic System

A standard on-site septic tank and leach field may be used at the O&M building to dispose sanitary wastewater, designed to meet operation and maintenance guidelines required by Tulare County laws, ordinances, regulations, and standards.

1.6.4 Inert Solids

Inert solid wastes resulting from construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, type 1-4 plastics, drywall, wood, and lubricating oils. Non-recyclable items include insulation, other plastics, food waste, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. A construction waste management plan would be prepared for review by the County and California City. Consistent with local regulations and the California Green Building Code, the plan would provide for diversion of a minimum of 50 percent of construction waste from landfill.

Chemical storage tanks (if any) would be designed and installed to meet applicable local and state regulations. Any wastes classified as hazardous, such as solvents, degreasing agents, concrete curing compounds, paints, adhesives, chemicals, or chemical containers, would be stored in an approved storage facility/shed/structure and disposed of as required by local and state regulations. Material quantities of hazardous wastes are not expected.

1.6.5 Health and Safety

Safety precautions and emergency systems would be implemented as part of the design and construction of the Project to ensure safe and reliable operation. Administrative controls would include classroom and hands-on training in O&M procedures, general safety items, and a planned maintenance program. These controls would work with the system design and monitoring features to enhance safety and reliability.

The Project would have an emergency response plan to address potential emergencies including chemical releases, fires, and injuries. All employees would be provided with communication devices, cell phones, or walkie-talkies to provide aid in the event of an emergency.

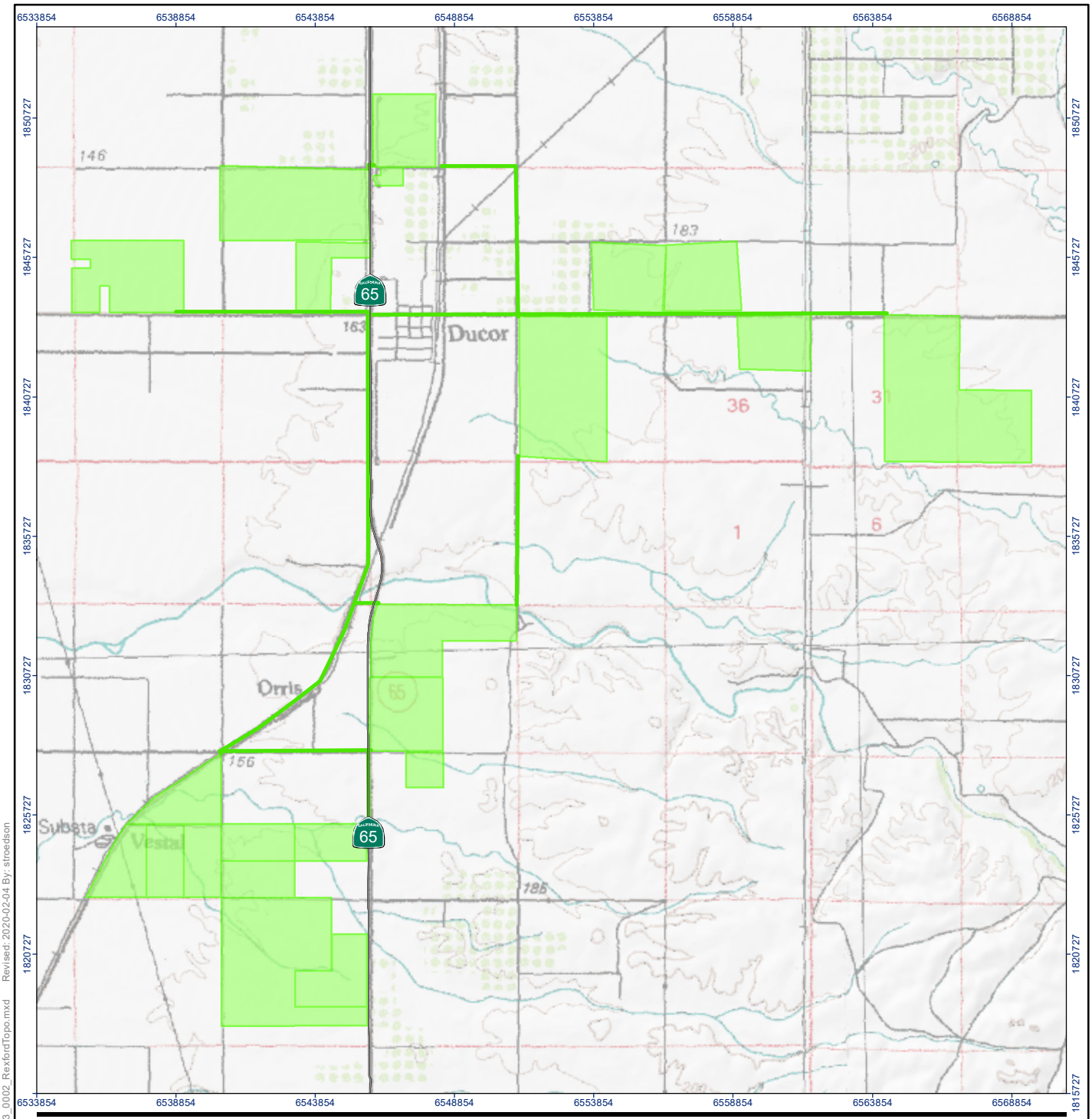
2.0 STUDY METHODS

2.1 PURPOSE AND SCOPE OF WORK

- Review available subsurface information for the sites,
- drill and sample 15 soil borings (2 locations were removed from the original scope) to a maximum depth of 10 feet,
- perform soil mechanics laboratory testing on select soil samples,
- evaluate geotechnical properties of soils pertinent to the CEQA Guidelines, and
- summarize findings, conclusions, and recommendations in this study.

2.2 PRE-FIELD ACTIVITIES

Soil boring locations were selected based on review of conceptual development plans and confirmed in the field at the time of field sampling. In addition, a site-specific Health and Safety Plan was developed in accordance with California Occupational Safety and Health Administration requirements to guide field activities.



Rexford Collector Route

Rexford Solar Project

0 0.5 1 Miles

(At original document size of 8.5x11)
1:63,360

N

Stantec

8MINUTE SOLAR ENERGY

Project Location
Northeast of Delano
Tulare County, CA

Prepared by JAC on 2020-02-03
TR by SET on 2020-02-03
IR by CB on 2020-02-03

Client/Project
185704633_0001
8 Minute Solar Energy
Rexford Solar Project

Figure No.
1

Title
Site Location Map

Notes
1. Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
2. Project Data Sources: 8 Minute Solar Energy and Stantec
3. Basemap USGS Topographic 1:100,000 scale mapsheets Delano (1982) and Isabella Lake (1982).

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2.4 FIELD EXPLORATION ACTIVITIES

Thirteen shallow soil borings (B1 through B5 and B7 through B14) were advanced at selected locations throughout the site to at most 10 feet deep (Figures 2 and 3). Relatively undisturbed samples were obtained using a modified California (CAL) sampler, which is a ring-lined split tube sampler with a 3-inch outer diameter and 2.5-inch inner diameter. CAL sampling followed ASTM International (ASTM) D3550 (Standard Practice for Ring-Lined Barrel Sampling of Soils) procedures. Disturbed bulk samples were also obtained from the drill cuttings.

The CAL and SPT samplers were driven with a 140-pound weight dropping 30 inches. The number of blows per 6-inch increment is noted on the boring logs. MTAI provided a report (GRL, 2019) which indicates the average hammer energy efficiency on the drill rig used at the project was 88%.

Samples were classified in the field using the United Soil Classification System (USCS), in accordance with ASTM D2488 (Standard Practice for Description and Identification of Soils [Visual-Manual Method]) procedures. The laboratory testing confirmed or modified field classifications as necessary for presentation on the boring logs. Soil samples were removed from the samplers, placed in appropriate containers, and transported in accordance with ASTM D4220 (Standard Practice for Preserving and Transporting Soil Samples).

The test pit logs are located in Appendix A. Soils are classified in accordance with the USCS, which is explained in "Symbols and Terms Used on Borehole and Test Pit Records" in Appendix A. The approximate test pit locations are shown on Figures 2 and 3.

2.5 LABORATORY SOIL TESTING

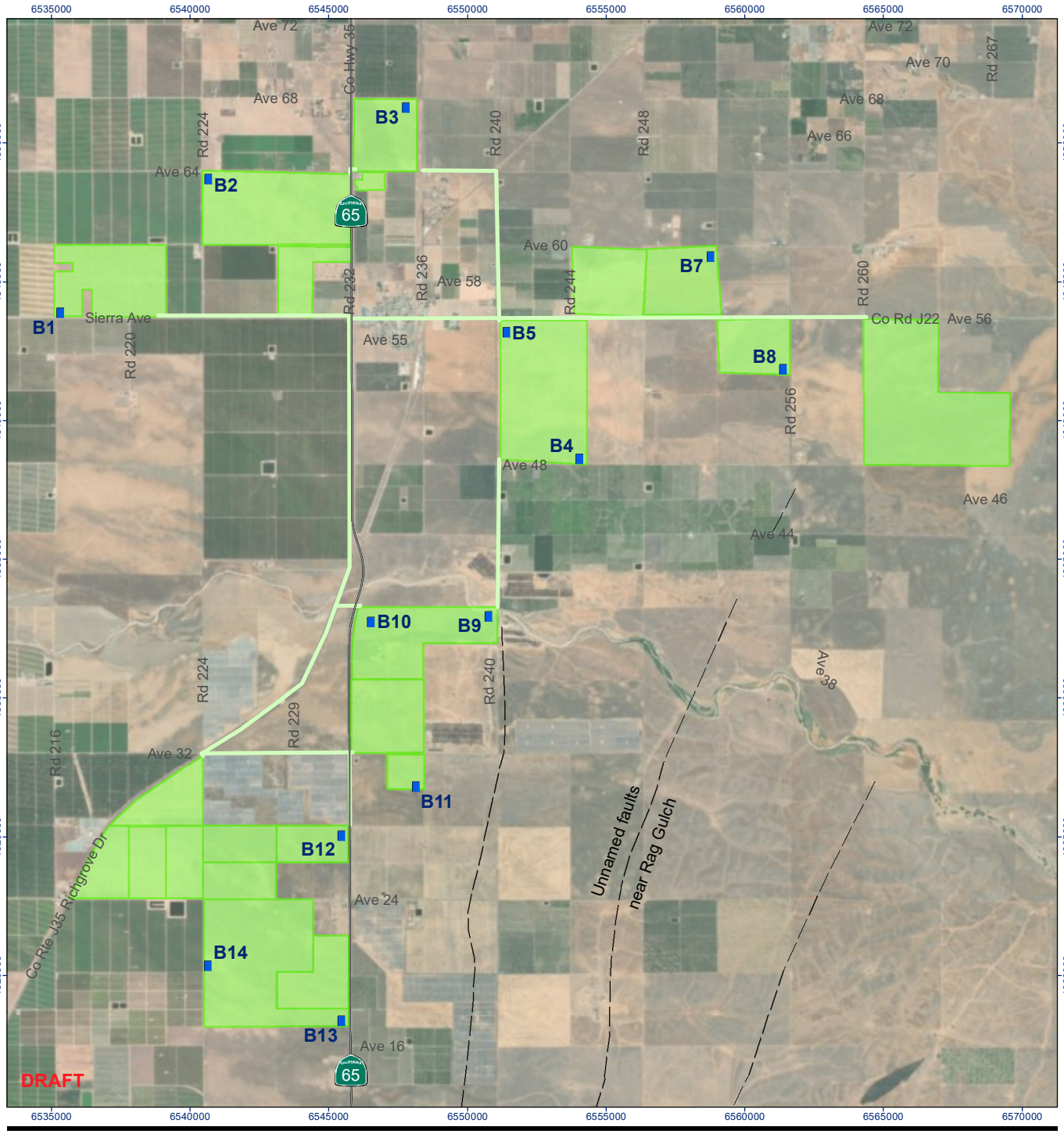
The following laboratory tests were performed on samples collected at the Site either in general accordance with the ASTM or contemporary practices of the soil engineering profession (Table 2):

Table 2. Summary of Laboratory Tests

Type of Test	ASTM Designation	Number Performed
Sieve Analysis	ASTM D422 and ASTM C136	11
#200 Wash	ASTM D1170	10
Atterberg Limits	ASTM D4318	10

Notes:
ASTM = ASTM International

The results of the laboratory tests are presented in Appendix B.



Test Pit Location
Rexford Collector Route
Rexford Solar Project

0 0.5 1 Miles
(At original document size of 8.5x11)
1:64,919

N

Stantec

8MINUTE SOLAR ENERGY

Project Location
Northeast of Delano
Tulare County, CA

Prepared by JAC on 2020-02-03
TR by SET on 2020-02-03
IR by CB on 2020-02-03

Client/Project
185704633_0001
8 Minute Solar Energy
Rexford Solar Project

Figure No.
2

Title
Subsurface Exploration Map

Notes
1. Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
2. Project Data Sources: DOGGR, July 2019. 8 Minute Solar Energy, 2019. Stantec, 2019
3. Basemap Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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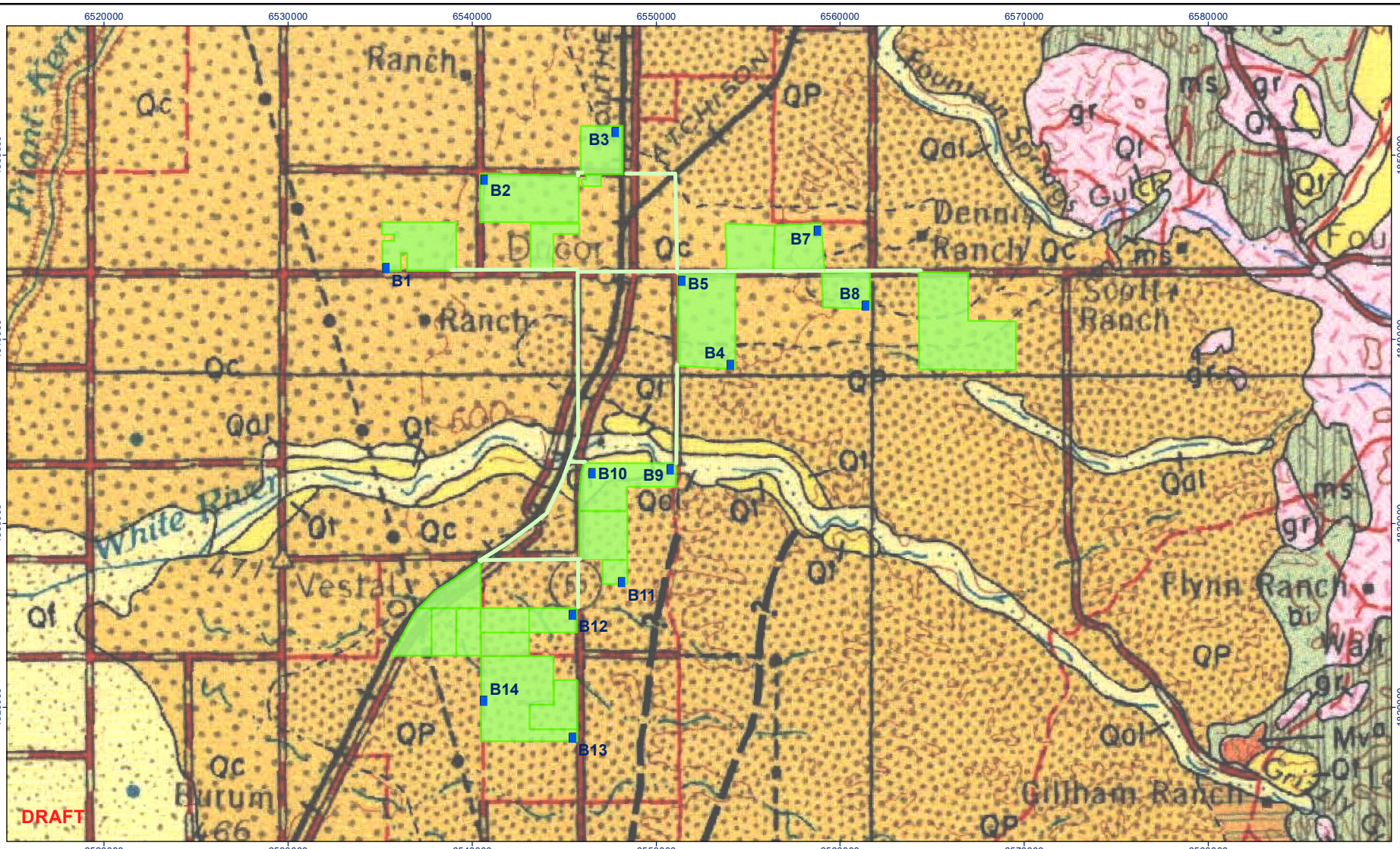

Test Pit Location

Rexford Collector Route

Rexford Solar Project

Geologic Units In Survey Area

- Qal - Alluvium
- Qc = Pleistocene Nonmarine
- Qp - Plio-Pleistocene Nonmarine
- Qt - Quaternary Nonmarine Terrace Deposits

N

0 0.75 1.5 Miles

(At original document size of 8.5x11)

1:95,040

Notes

1. Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
2. Data Sources: 8 Minute Solar Energy and Stantec, 2019.
3. Geologic Map of California: Bakersfield Sheet, 1964.

Stantec

8minute SOLAR ENERGY

Project Location
Northeast of Delano
Tulare County, CA

Prepared by JAC on 2020-02-03
TR by SET on 2020-02-03
IR by CB on 2020-02-03

Client/Project
8 Minute Solar Energy
Rexford Solar Project

185704633_0005

Figure No.
3

DRAFT

Title
Geologic Map

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3.0 RESULTS

3.1 REGIONAL GEOLOGY

The site is located in the southeastern portion of the Great Valley Geomorphic Province in Central California. This region is characterized as a 50-mile-wide and 400-mile-long sediment- filled trough in which the sediments have been deposited, almost continuously, since the Jurassic period. The Site resides in the portion of the Province drained by surface runoff into White River, which is located approximately 1.1 to 3.4 miles south of the northern parcels and 0.1 to 2.9 miles north of the southern parcels.

Geologic mapping presented in the United State Geological Survey (USGS) Bakersfield Quadrangle (USGS, 1964) indicates the Site is underlain by Quaternary alluvium deposits, Pleistocene non-marine sedimentary deposits, late Pliocene to early Pleistocene Plio-Pleistocene non-marine deposits, and Quaternary non-marine terrace deposits. Literature from the USGS indicates the Pliocene, Pleistocene, and Quaternary deposits consist of sediments deposited during flood stage of major streams in the area between natural stream levees and fans consisting of gravel, sand, silt, and clay.

3.2 SUBSURFACE CONDITIONS

The materials encountered in our borings consist of Quaternary alluvium (Qal) deposits, Pleistocene non-marine sedimentary (Qc) deposits, late Pliocene to early Pleistocene Plio-Pleistocene non-marine sedimentary (Qp) deposits, and Quaternary non-marine terrace (Qt) deposits. A brief description of the subsurface conditions is provided in this section. Detailed descriptions of the subsurface conditions are provided in the boring logs included in Appendix A.

Alluvium Deposits (Qal) – Alluvium deposits were encountered in one soil boring and extend to depths of at least 10 feet bgs. The alluvium deposits encountered at this location primarily consist of sand with variable amounts of clay (SC USCS soil type), and clay with variable amounts of sand (CL USCS soil type). The sandy deposits encountered were loose to medium dense and generally dry. The low plasticity sandy clay deposits were stiff and generally moist.

Pleistocene Non-Marine Sedimentary Deposits (Qc) – Pleistocene non-marine sedimentary deposits were encountered in four soil borings and extends to depths of at least 10 feet bgs. The non-marine sedimentary deposits encountered at this location primarily consist of sand with variable amounts of clay (SP and SC USCS soil type), gravel (GC USCS soil type), and clay with variable amounts of sand and gravel (CL USCS soil type). The sandy deposits encountered were very dense and generally dry to moist. The low plasticity sandy clay deposits were very stiff and generally moist. The gravel deposits were dry.

Plio-Pleistocene Non-Marine Sedimentary Deposits (Qp) – Late Pliocene to early Pleistocene non-marine sedimentary deposits were encountered in seven soil borings and extends to depths of at least 10 feet bgs. The non-marine sedimentary deposits encountered at this location primarily consist of sand with variable amounts of clay (SW-SC and SC USCS soil type) and clay with variable amounts of sand and gravel (CL USCS soil type). The sandy deposits encountered were medium dense to very dense and generally dry to moist. The low plasticity sandy clay deposits were very stiff to hard and generally moist.

Quaternary Non-Marine Terrace Deposits (Qt) – Late Pleistocene to early Holocene non-marine terrace deposits were encountered in one soil boring and extends to depths of at least 5 feet bgs. The non-marine terrace deposits encountered at this location primarily consist of clayey sand (SC USCS soil type). The sandy deposits encountered were medium dense and generally dry.

3.3 REGIONAL GROUNDWATER

The Tule Groundwater Subbasin is a portion of the San Joaquin Valley Groundwater Basin that is almost entirely within Tulare County. The basin is bounded on the north by various water districts, the largest of which is the Lower Tule River Irrigation District, on the east by the Sierra Nevada Mountain Range, and on the south and west by the Tulare County line (DWR, 2018).

Static groundwater was not encountered in the test performed for this investigation. Groundwater data from an offsite groundwater production well located approximately 1.1 miles northwest to 4.4 miles southwest of the site, groundwater is expected to be encountered at a depth of approximately 480 feet below the ground surface (bgs) and flows to the west (DWR, 2019). Groundwater levels may fluctuate in the future due to rainfall, irrigation, broken pipes, or changes in site drainage.

3.4 REGIONAL SEISMICITY

The Project site is located within a highly active seismic zone. A regional faulting and seismicity map are presented in Figure 4. This fault map also provides information regarding recent earthquakes in the Project area. Note that purple fault lines correspond to faults that are not recognized as active faults. Several of the more recent earthquakes in the Project area include the 1922 San Andreas (Cholame) earthquake, the 1952 White Wolf earthquake, and the 1982 Little Lake earthquake (CGS 1999).

The estimated distance of the site to the nearest expected surface expression of an active fault is presented in Table 3. The distance measurement was taken from a location in the middle of the site. The location from which measurements were obtained has a latitude of 35.862118°, and a longitude of -119.036015°.

Table 3. Faults within 60 Miles of the Project Area

Fault	Distance (miles) [1]	Maximum Moment Magnitude [1]
White Wolf	45.8	7.2
Great Valley 14 (Kettleman Hills)	50.7	7.2
Pleito	58.9	7.1
South San Andreas	60.1	8.1

Note: 1. Measured from 2008 National Seismic Hazard Maps—Source Parameters Website—USGS (USGS 2008).

3.4.1 Fault Rupture Hazard

The site is not located within a currently mapped Alquist-Priolo Special Studies Fault Zone (CDMG 2002). As noted above, the nearest active fault is the White Wolf Fault, located approximately 45.8 miles southeast of the site. No

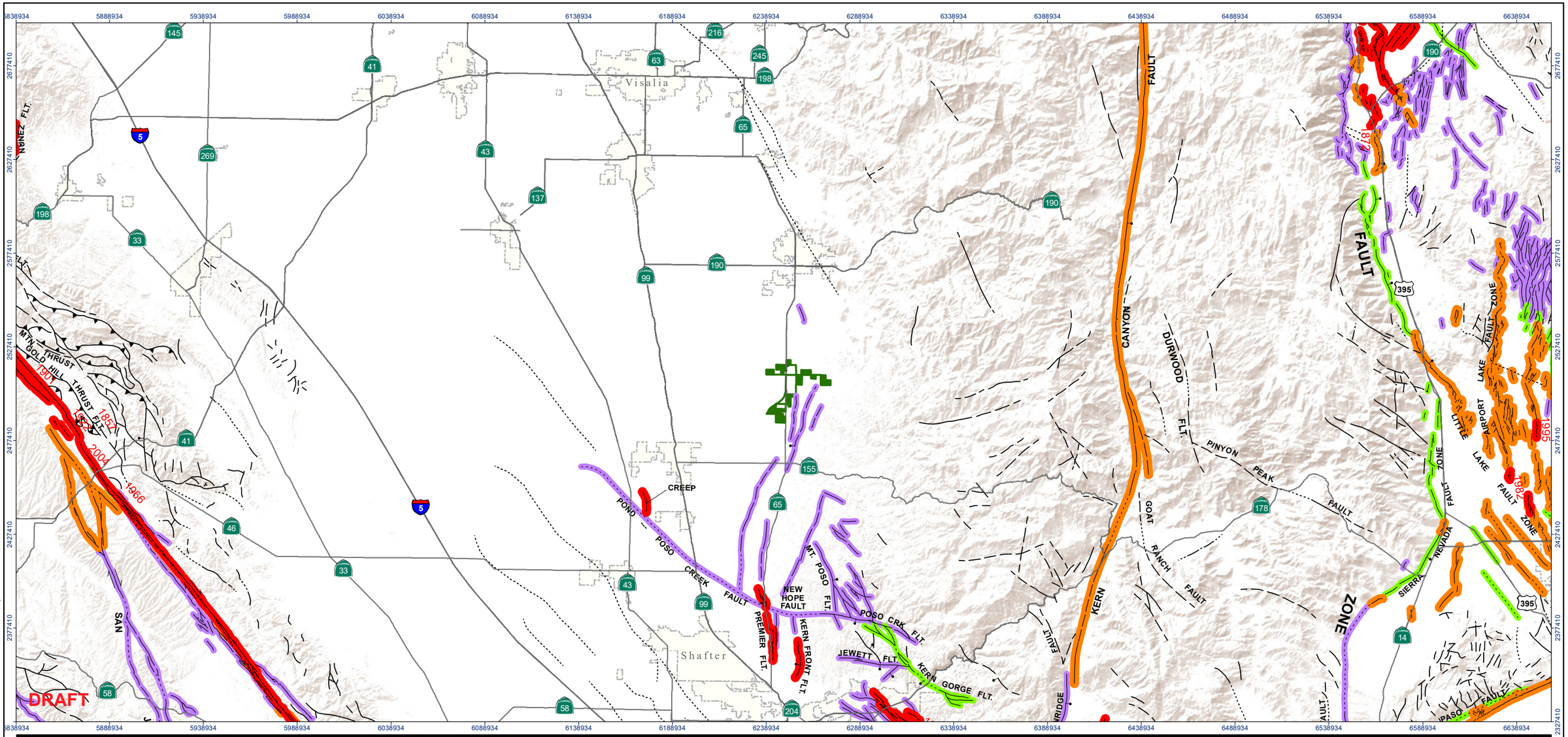
active faults are known to underlie or Project toward the site. Therefore, the probability of surface fault rupture at the site from a known active fault is considered low.

3.4.2 Strong Ground Shaking

Strong ground shaking can be expected at the site during moderate to severe earthquakes in the general region. This is common to most areas in southern California.

Information published by USGS indicates the peak ground acceleration with a 2 percent probability of being exceeded at the site in 50 years is 0.37g (USGS 2014), where g is the acceleration due to gravity determined in accordance with the U.S. Seismic Design Maps web site. Mitigation of strong ground shaking is typically provided by designing structures in accordance with the latest addition of the California Building Code.

Figure 4. Regional Faulting and Seismicity



1916 Surface Rupture Point Labeled By Year

- fault, approx. located
- fault, certain
- fault, concealed
- dextral fault, certain
- fault, certain (ball and bar)
- fault, approx. located (ball and bar)
- fault, concealed (ball and bar)

Recency of Movement

- Historic
- Holocene
- Late Quaternary
- Quaternary
- Rexford Solar Project

0 5 10 Miles
(At original document size of 11x17)
1:633,600

N

Stantec

8MINUTE SOLAR ENERGY

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Fault Activity Map from California Geological Survey, 2015. Seismicity from USGS, 2012. Project Data from 8 Minute Solar Energy and Stantec
3. Basemap Sources: Esri, USGS, NOAA data service, Statewide Geologic Map, 2010.

Project Location
SW of California City
Kern County, CA

Prepared by JAC on 2020-02-03
TR by SET on 2020-02-03
IR by CB on 2020-02-03

Client/Project
8 Minute Solar Energy
Rexford Solar Project

185704633_0001

Figure No.
4

DRAFT

Title
Regional Faulting and Seismicity

V:\185704633_RexfordSolar\03_data\gis_cad\gis\185704733_0004_RexfordSeismic.mxd Revised: 2020-02-04 By: streefson

3.4.3 Liquefaction

Liquefaction of saturated sandy soils is generally caused by the sudden decrease in soil shear strength due to vibration. During cyclic shaking typically caused by an earthquake, the soil mass is distorted, and inter-particle stresses are transferred from the soil particles to the pore water. As pore pressure increases, the bearing capacity decreases, and the soil may behave temporarily as a viscous fluid (liquefaction), and consequently loses its capacity to support the structures founded thereon.

Engineering research of soil liquefaction potential (Seed, et al. 1985, Seed and Idris 1982) indicates that generally, the following three basic factors must exist concurrently for liquefaction to occur:

- A source of ground shaking such as an earthquake capable of generating soil mass distortions.
- A relatively loose sandy soil fabric exhibiting a potential for volume reduction.
- A relative shallow groundwater table (within approximately 50 feet below ground surface) or completely saturated soil conditions that would allow positive pore pressure generation.

The site is not located within a current, mapped California Liquefaction Hazard Zone. In addition, groundwater in the Project area is expected to be approximately 480 feet below the ground surface (DWR, 2019). Based on the near surface soil conditions and depth to groundwater, it is our opinion that the potential for inception of liquefaction and liquefaction-related ground failure is low.

3.4.4 Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or “free” face such as an open body of water, channel, or excavation. This movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free.

Due to the low potential for liquefaction, the depth of groundwater, and the fact that the site is not located near free faces or bodies of water, the potential for lateral spreading is considered low.

3.5 SUBSIDENCE

Groundwater levels near the site in the San Joaquin Valley where the site is located have declined more than 450 feet since the 1960s. These groundwater-level declines have caused the aquifer system to compact, resulting in land subsidence. Land subsidence within the San Joaquin Valley has been most recently evaluated by the USGS through the use of Interferometric Synthetic Aperture Radar between 2011 and 2015. Based on these recent studies, parts of the site west of the town of Ducor are within an area that has sustained up to seven inches of subsidence between 2011 and 2015 due to groundwater draw down (USGS 2020). Due to the depth of groundwater and the fact that the site is located in a mapped subsidence area, the potential for subsidence is considered moderate to high.

3.6 EXPANSIVE SOIL POTENTIAL

Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). Since near-surface soils encountered during the recent geotechnical investigation are mostly sandy soils whose expansion potential is considered low, special design for expansive soils would likely not be necessary for the proposed development.

3.7 SLOPES

The site is relatively flat, with a topographic gradient less than 2 percent. Permanent slopes steeper than 5:1 (horizontal to vertical) or higher than 5 feet are not anticipated to be constructed or built upon for the Project. Due to the existing topography and the proposed grading, landslides are not considered a potential hazard for the Project. The stability of slopes, if any, should be verified when design-grading information becomes available.

3.8 EROSION

The predominantly coarse-grained soils underlying the site are potentially susceptible to erosion or the loss of topsoil due to surface water flows.

Mitigation of soil erosion may include selective grading, establishment of anchoring vegetation, design of runoff control features such as drainage ditches, and construction of erosion control features such as pavements and surface mats. These mitigation options should be addressed in the design-level evaluations for the Project.

4.0 CONCLUSIONS

Based on the currently planned development, it is our opinion that the soils would require additional assessment to determine mitigation measures for strong ground shaking and erosion.

Mitigation options for these hazards are provided in the preceding sections. Impacts should be mitigated through the application of standard conditions of development, which require preparation of a design-level geotechnical study as a condition of grading permit issuance.

Based on the findings of this CEQA Level Geotechnical Study, a completed CEQA questionnaire for the Geology and Soils Section has been included as Appendix C. As recommended above, items checked as “Less than Significant with Mitigation” should be addressed in the scope of a future design-level geotechnical investigation.

5.0 REFERENCES

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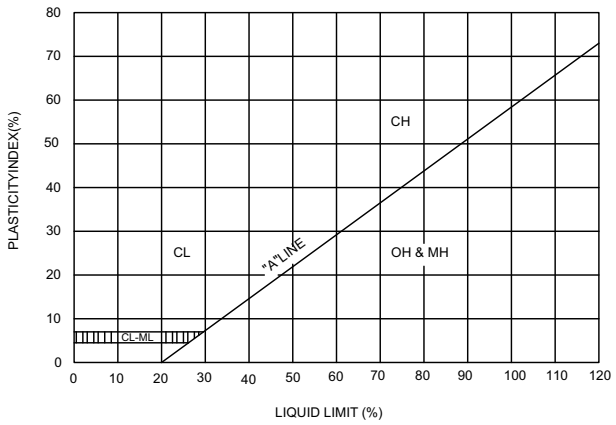
Appendix A TEST PIT LOGS

UNIFIED SOIL CLASSIFICATION (ASTM D-2487)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	*CLEAN GRAVELS <5% FINES	Cu>4 AND 1<Cc<3	GW	WELL-GRADED GRAVEL
			Cu>4 AND 1>Cc>3	GP	POORLY-GRADED GRAVEL
		*GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	*CLEAN SANDS <5% FINES	Cu>6 AND 1<Cc<3	SW	WELL-GRADED SAND
			Cu>6 AND 1>Cc>3	SP	POORLY-GRADED SAND
		*SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR CL	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

* Dual symbols required for fines content between 5% and 12%

PLASTICITY CHART



SAMPLER TYPES

- SPT
- Modified California (2.5" I.D.)
- Rock Core
- Shelby Tube
- No Recovery
- Grab Sample

ADDITIONAL TESTS

COR	-	CHEMICAL ANALYSIS (CORROSIVITY)	PI	-	PLASTICITY INDEX
CD	-	CONSOLIDATED DRAINED TRIAXIAL	EI	-	EXPANSION INDEX
CN	-	CONSOLIDATION	TC	-	CYCLIC TRIAXIAL
CU	-	CONSOLIDATED UNDRAINED TRIAXIAL	TV	-	TORVANE SHEAR
DS	-	DIRECT SHEAR	UC	-	UNCONFINED COMPRESSION
PP	-	POCKET PENETROMETER (TSF)	(1.5)	-	(WITH SHEAR STRENGTH IN KSF)
#200	-	Percent Passing #200 SIEVE			
RV	-	R-VALUE	UU	-	UNCONSOLIDATED UNDRAINED TRIAXIAL
SA	-	SIEVE ANALYSIS: % PASSING			
▼	-	WATER LEVEL			

PENETRATION RESISTANCE (RECORDED AS BLOWS / FOOT)

SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	STRENGTH** (KSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.5
MEDIUM DENSE	10 - 30	MEDIUM STIFF	4 - 8	0.5-1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

* * UNDRAINED SHEAR STRENGTH IN KIPS/SQ. FT. AS DETERMINED BY LABORATORY TESTING OR APPROXIMATED BY THE STANDARD PENETRATION TEST, POCKET PENETROMETER, TORVANE, OR VISUAL OBSERVATION.

LEGEND TO BORING LOGS AND SOIL DESCRIPTIONS

Stantec

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B01** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: **35° 53' 31.46"** LONGITUDE: **119° 5' 20.14"**
GROUND ELEV (ft): **480** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLEISTOCENE NONMARINE DEPOSITS (Qc)						
		GC	**CLAYEY GRAVEL WITH SAND** ; GC; brown; 40% fine gravel; 38% fine to coarse grained sand; 22% fines; dry		B1-2'				
5		SC	**CLAYEY SAND WITH GRAVEL** ; SC; brown; 10% fine gravel; 60% fine to coarse grained sand; 30% fines; very dense; dry		B1-5'		13 20 34		5
					B1-7'		34 50-4"		
		CL	**GRAVELLY CLAY WITH SAND** ; CL; brown; 10% fine gravel; 20% fine to coarse grained sand; 70% fines; low plasticity; very stiff; moist		B1-10'		3 10 14		
10			Hole terminated at 10 feet.						10

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B02** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: **35° 54' 21.88"** LONGITUDE: **119° 4' 16.54"**
GROUND ELEV (ft): **496** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLEISTOCENE NONMARINE DEPOSITS (Qc)						
		SC	**CLAYEY SAND WITH GRAVEL** ; SC; brown; 65% fine to coarse grained sand; 35% fines; dry		B2-2'				
5		SP	**POORLY GRADED SAND WITH GRAVEL** ; SP; brown; 23% fine gravel; 75% fine to coarse grained sand; 2% fines; very dense; moist		B2-5'		13 32 50-5"		5
					B2-7'		14 32 30		
		CL	**GRAVELLY CLAY WITH SAND** ; CL; brown; 10% fine gravel; 20% fine to coarse grained sand; 70% fines; low plasticity; very stiff; moist		B2-10'		4 8 11		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B03** PAGE 1 OF 1

Stantec

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 54' 45.41"** LONGITUDE: **119° 2' 45.35"**
GROUND ELEV (ft): **525** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		SC	**CLAYEY SAND WITH GRAVEL** ; SC; brown; 7% fine gravel; 73% fine to coarse grained sand; 21% fines; moist		B3-2'				
5		SW-SC	**WELL GRADED SAND WITH CLAY** ; SW-SC; brown; 6% fine gravel; 84% fine to coarse grained sand; 10% fines; very dense; dry		B3-5'		14 18 20		5
					B3-7'		27 50		
		CL	**GRAVELLY CLAY WITH SAND** ; CL; brown; 10% fine gravel; 20% fine to coarse grained sand; 70% fines; low plasticity; hard; moist		B3-10'		14 19 20		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B04** PAGE 1 OF 1

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 52' 40.42"** LONGITUDE: **119° 1' 31.34"**
GROUND ELEV (ft): **607** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		SC	**CLAYEY SAND WITH GRAVEL** ; SC; brown; 2% fine gravel; 68% fine to coarse grained sand; 30% fines; moist		B4-2'				
5			2% fine gravel; 72% fine to coarse grained sand; 26% fines; dense; moist		B4-5'		17 27 44		5
		CL	**GRAVELLY CLAY WITH SAND** ; CL; brown; 10% fine to coarse grained sand; 90% fines; low plasticity; very stiff; moist		B4-7'		10 11 13		
					B4-10'		5 10 12		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B05** PAGE 1 OF 1

Stantec

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 53' 26.18"** LONGITUDE: **119° 2' 4.86"**
GROUND ELEV (ft): **558** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.5**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLEISTOCENE NONMARINE DEPOSITS (Qc)						
		SC	**CLAYEY SAND** ; SC; brown; 63% fine to coarse grained sand; 37% fines; dry		B5-2'				
5			59% fine to coarse grained sand; 41% fines; stiff; dry		B5-5'				5
			Hole terminated at 5.5 feet.						
10									10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B07** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: **35° 53' 52.91"** LONGITUDE: **119° 0' 34.84"**
GROUND ELEV (ft): **607** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLEISTOCENE NONMARINE DEPOSITS (Qc)						
		SC	**CLAYEY SAND WITH GRAVEL** ; SC; brown; 5% fine gravel; 50% fine to coarse grained sand; 25% fines; dry		B7-2'				
5		CL	**CLAY WITH SAND** ; CL; brown; 26% fine to coarse grained sand; 74% fines; low plasticity; very stiff; moist		B7-5'		8 12 16		5
					B7-7'		5 14 13		
10			Hole terminated at 10 feet.		B7-10'		5 6 7		10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B08** PAGE 1 OF 1

Stantec

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 53' 11.04"** LONGITUDE: **119° 0' 1.85"**
GROUND ELEV (ft): **610** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		SC	**CLAYEY SAND** ; SC; brown; 57% fine to coarse grained sand; 43% fines; dry		B8-2'				
5			5% fine gravel; 80% fine to coarse grained sand; 15% fines; very dense; dry below 5 feet		B8-5'		23 50-5"		5
			Medium dense below 7 feet		B8-7'		9 9 10		
		CL	**CLAY WITH SAND** ; CL; brown; 25% fine to coarse grained sand; 75% fines; low plasticity; very stiff; moist		B8-10'		9 13 14		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B09** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: **35° 51' 43.62"** LONGITUDE: **119° 2' 9.65"**
GROUND ELEV (ft): **519** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			HOLOCENE ALLUVIUM DEPOSITS (Qal)						
		SC	**CLAYEY SAND** ; SC; brown; 60% fine to coarse grained sand; 40% fines; dry		B9-2'				
5			4% fine gravel; 62% fine to coarse grained sand; 34% fines; loose below 5 feet		B9-5'		3 3 4		5
			Medium dense below 7 feet		B9-7'		5 7 9		
		CL	**CLAY WITH SAND** ; CL; brown; 25% fine to coarse grained sand; 75% fines; low plasticity; stiff; moist		B9-10'		4 5 7		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B10** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: **35° 51' 46.79"** LONGITUDE: **119° 3' 8.42"**
GROUND ELEV (ft): **509** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **5.5**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			QUATERNARY NONMARINE TERRACE DEPOSITS (Qt)						
		SC	**CLAYEY SAND** ; SC; brown; 58% fine to coarse grained sand; 42% fines; dry		B10-2'				
5					B10-5'				5
			Hole terminated at 5.5 feet.						
10									10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B11** PAGE 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: **35° 50' 42.73"** LONGITUDE: **119° 2' 41.24"**
GROUND ELEV (ft): **573** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		CL	**SANDY CLAY** ; CL; brown; 47% fine to medium grained sand; 63% fines; moist		B11-2'				
5		SC	**CLAYEY SAND** ; SC; brown; 61% fine to coarse grained sand; 39% fines; low plasticity; very dense; moist		B11-5'		13 21 32		5
		CL	**SANDY CLAY** ; CL; brown; 45% fine to medium grained sand; 65% fines; low plasticity; hard; moist		B11-7'		27 48 50-5.5"		
			Very stiff below 10 feet		B11-10'		6 11 15		
10			Hole terminated at 10 feet.						10

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B12** PAGE 1 OF 1

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 50' 27.58"** LONGITUDE: **119° 3' 14.72"**
GROUND ELEV (ft): **543** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		SC	**CLAYEY SAND** ; SC; brown; 60% fine to coarse grained sand; 40% fines; dry		B12-2'				
5			1% fine gravel; 67% fine to coarse grained sand; 32% fines; very dense below 5 feet		B12-5'		18 34 50-4"		5
			Medium dense below 7 feet		B12-7'		11 15 13		
		CL	**CLAY WITH SAND** ; CL; brown; 25% fine to coarse grained sand; 75% fines; low plasticity; hard; moist		B12-10'		13 16 32		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B13** PAGE 1 OF 1

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 49' 18.33"** LONGITUDE: **119° 3' 14.69"**
GROUND ELEV (ft): **573** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		SC	**CLAYEY SAND** ; SC; brown; 70% fine to coarse grained sand; 30% fines; moist		B13-2'				
5			2% fine gravel; 73% fine to coarse grained sand; 25% fines; dense below 5 feet		B13-5'		8 10 21		5
			3% fine gravel; 66% fine to coarse grained sand; 31% fines; very dense below 7 feet		B13-7'		44 50-4"		
		CL	**CLAY WITH SAND** ; CL; brown; 25% fine to coarse grained sand; 75% fines; low plasticity; hard; moist		B13-10'		15 32 50-5"		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

PROJECT: **8me Rexford LLC**
LOCATION: **Ducor, California**
PROJECT NUMBER: **185704733**
DRILLING: STARTED **12/12/19** COMPLETED: **12/12/19**
INSTALLATION: STARTED **12/12/19** COMPLETED: **12/12/19**
DRILLING COMPANY: **Moore Twining Associates, Inc.**
DRILLING EQUIPMENT: **CME 75**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING EQUIPMENT: **Split Spoon**

WELL / TEST PIT / BOREHOLE NO: **B14** PAGE 1 OF 1

Stantec

NORTHING (ft): EASTING (ft):
LATITUDE: **35° 49' 40.3"** LONGITUDE: **119° 4' 16.22"**
GROUND ELEV (ft): **531** TOC ELEV (ft):
INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **10.0**
STATIC DTW (ft): **NE** WELL DEPTH (ft): **---**
WELL CASING DIAMETER (in): **---** BOREHOLE DIAMETER (in): **8**
LOGGED BY: **BF** CHECKED BY: **JF**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Geotechnical Lab Testing	Blow Count	PID Reading (ppmv)	Depth (feet)
			PLIO-PLEISTOCENE NONMARINE DEPOSITS (Qp)						
		SC	**CLAYEY SAND** ; SC; brown; 60% fine to coarse grained sand; 40% fines; dry		B14-2'				
5			64% fine to coarse grained sand; 36% fines; medium dense below 5 feet		B14-5'		4 5 18		5
			Dense below 7 feet		B14-7'		10 14 17		
		CL	**CLAY WITH SAND** ; CL; brown; 20% fine to coarse grained sand; 80% fines; low plasticity; very stiff; moist		B14-10'		13 24 31		
10			Hole terminated at 10 feet.						10

GEO FORM 304 8ME_REXFORD_LOGS_121219.GPJ SECOR INTL.GDT 1/21/20

Appendix B LABORATORY TEST RESULTS

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	CM	Lab ID	B1-7'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	282.00	Moisture Content (%)	11.4
Initial Oven Dry Sample Mass (g)	253.10		
Final Oven Dry Sample Mass (g)	152.30		
Materials Finer Than 75µm (No. 200) Sieve (g)	100.80		
Percent Finer Than 75µm (No. 200) Sieve (%)	39.8		

Comments

Reviewed By JF

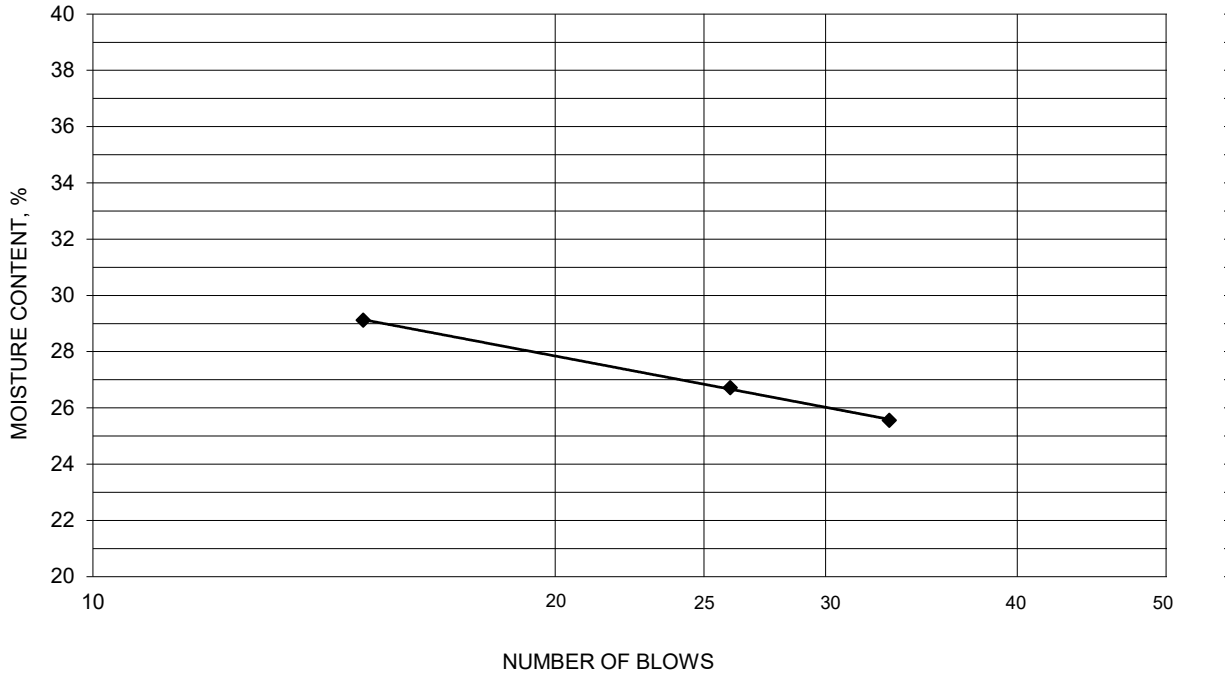
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	CM			Lab ID	B1-7'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-27-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
21.26	19.78	13.99	33	25.6	
20.69	19.21	13.67	26	26.7	
23.50	21.24	13.48	15	29.1	27

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
20.66	19.74	13.75	15.4	15	12

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B2-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	234.10	Moisture Content (%)	4.7
Initial Oven Dry Sample Mass (g)	223.60		
Final Oven Dry Sample Mass (g)	145.00		
Materials Finer Than 75µm (No. 200) Sieve (g)	78.60		
Percent Finer Than 75µm (No. 200) Sieve (%)	35.2		

Comments

Reviewed By JF

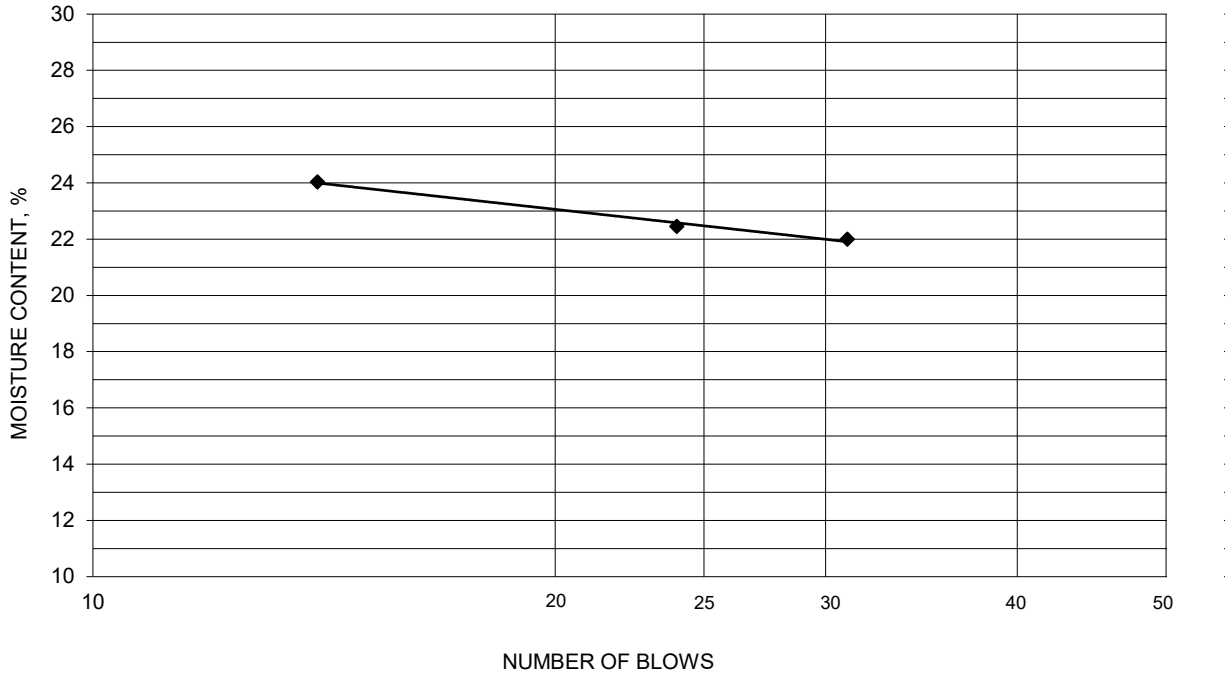
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	Grab			Lab ID	B2-2'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-27-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
22.55	20.94	13.62	31	22.0	
22.94	21.22	13.56	24	22.5	
22.88	21.07	13.54	14	24.0	22

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
20.78	19.85	13.74	15.2	15	7

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B5-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	307.20	Moisture Content (%)	5.5
Initial Oven Dry Sample Mass (g)	291.20		
Final Oven Dry Sample Mass (g)	183.10		
Materials Finer Than 75µm (No. 200) Sieve (g)	108.10		
Percent Finer Than 75µm (No. 200) Sieve (%)	37.1		

Comments

Reviewed By JF

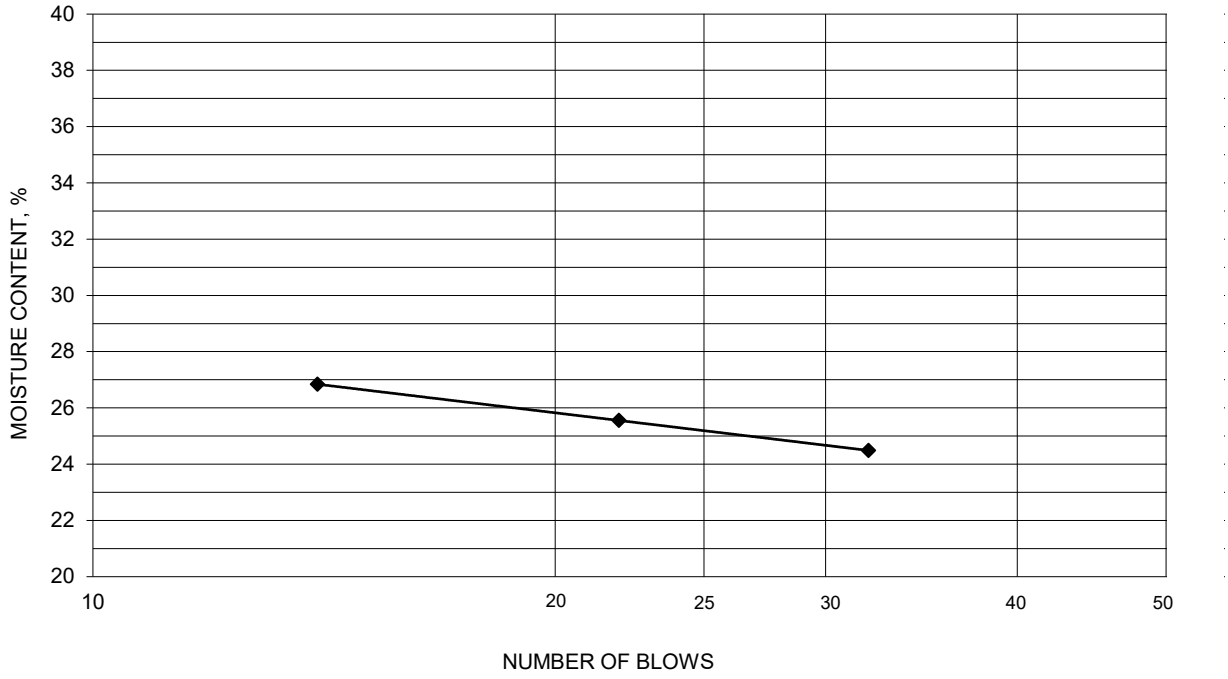
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	Grab			Lab ID	B5-2'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-27-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
22.15	20.48	13.66	32	24.5	
23.15	21.20	13.57	22	25.6	
23.29	21.25	13.65	14	26.8	25

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
21.12	20.10	13.69	15.9	16	9

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	SPT	Lab ID	B5-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	271.60	Moisture Content (%)	8.4
Initial Oven Dry Sample Mass (g)	250.50		
Final Oven Dry Sample Mass (g)	147.70		
Materials Finer Than 75µm (No. 200) Sieve (g)	102.80		
Percent Finer Than 75µm (No. 200) Sieve (%)	41.0		

Comments

Reviewed By JF

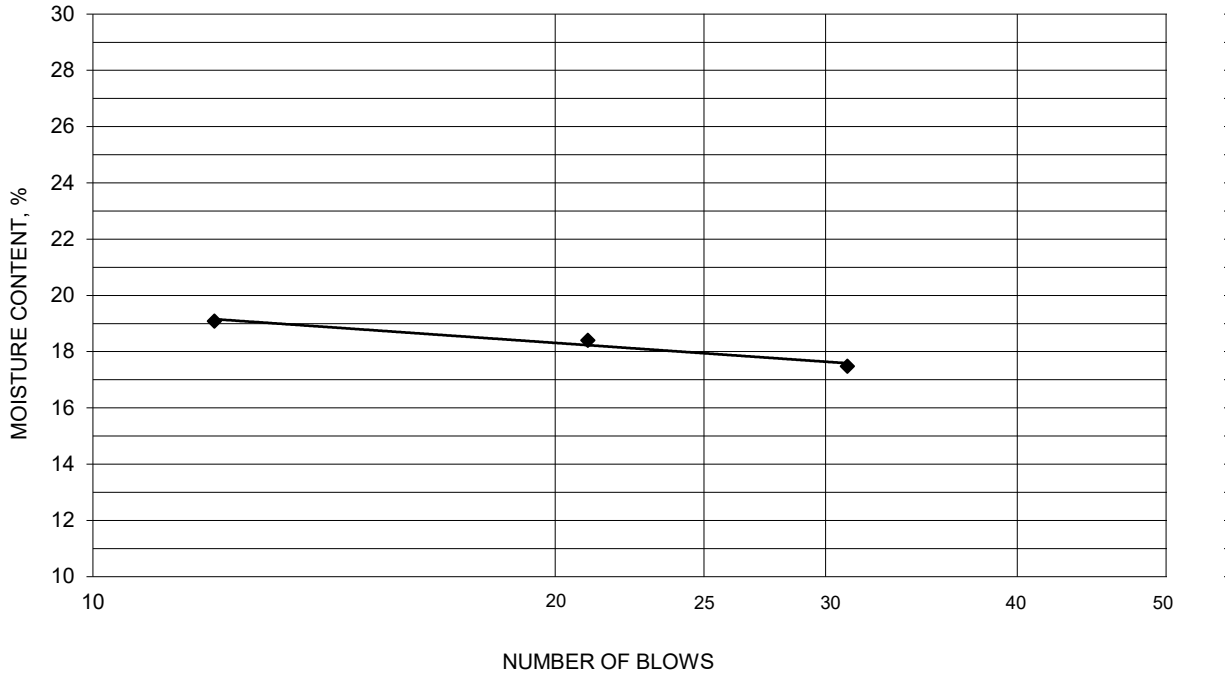
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	CM			Lab ID	B5-5'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-26-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
22.12	20.84	13.52	31	17.5	
27.32	25.22	13.81	21	18.4	
22.91	21.41	13.55	12	19.1	18

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
23.65	22.46	13.68	13.6	14	4

Remarks: USCS Soil Type = CL-ML

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	CM	Lab ID	B7-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	275.70	Moisture Content (%)	20.9
Initial Oven Dry Sample Mass (g)	228.10		
Final Oven Dry Sample Mass (g)	60.20		
Materials Finer Than 75µm (No. 200) Sieve (g)	167.90		
Percent Finer Than 75µm (No. 200) Sieve (%)	73.6		

Comments

Reviewed By JF

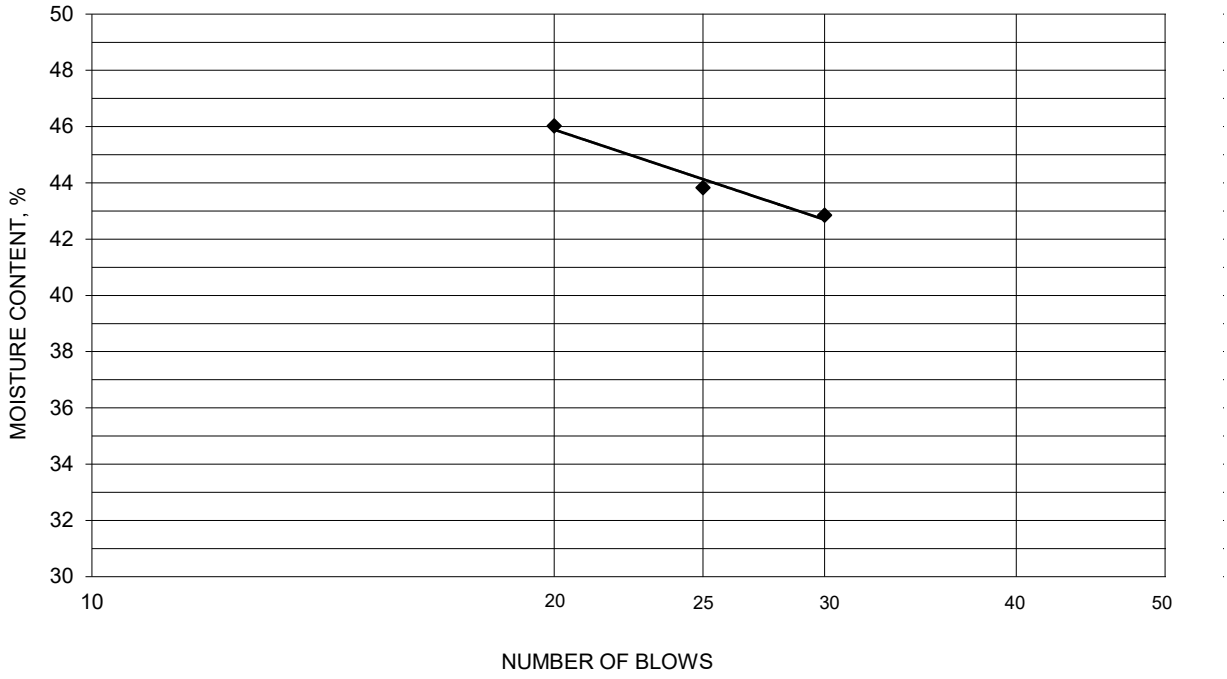
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	CM			Lab ID	B7-5'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	10
Test Date	12-30-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
21.31	18.97	13.51	30	42.9	
21.12	18.81	13.54	25	43.8	
19.32	17.64	13.99	20	46.0	44

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
18.46	17.81	13.68	15.7	16	28

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B8-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	212.40	Moisture Content (%)	8.8
Initial Oven Dry Sample Mass (g)	195.20		
Final Oven Dry Sample Mass (g)	110.70		
Materials Finer Than 75µm (No. 200) Sieve (g)	84.50		
Percent Finer Than 75µm (No. 200) Sieve (%)	43.3		

Comments

Reviewed By JF

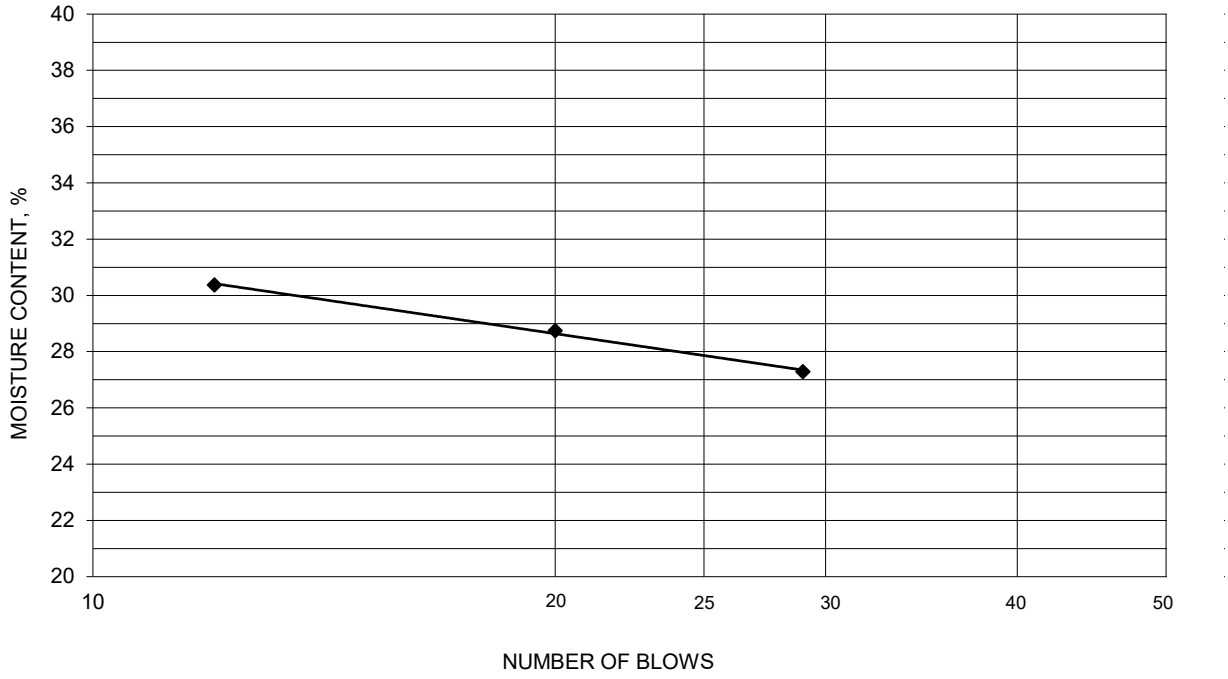
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	Grab			Lab ID	B8-2'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-30-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
23.14	21.17	13.95	29	27.3	
21.99	20.09	13.48	20	28.7	
22.16	20.21	13.79	12	30.4	28

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
25.20	23.79	13.72	14.0	14	14

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B10-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	314.70	Moisture Content (%)	3.9
Initial Oven Dry Sample Mass (g)	302.80		
Final Oven Dry Sample Mass (g)	176.90		
Materials Finer Than 75µm (No. 200) Sieve (g)	125.90		
Percent Finer Than 75µm (No. 200) Sieve (%)	41.6		

Comments

Reviewed By JF

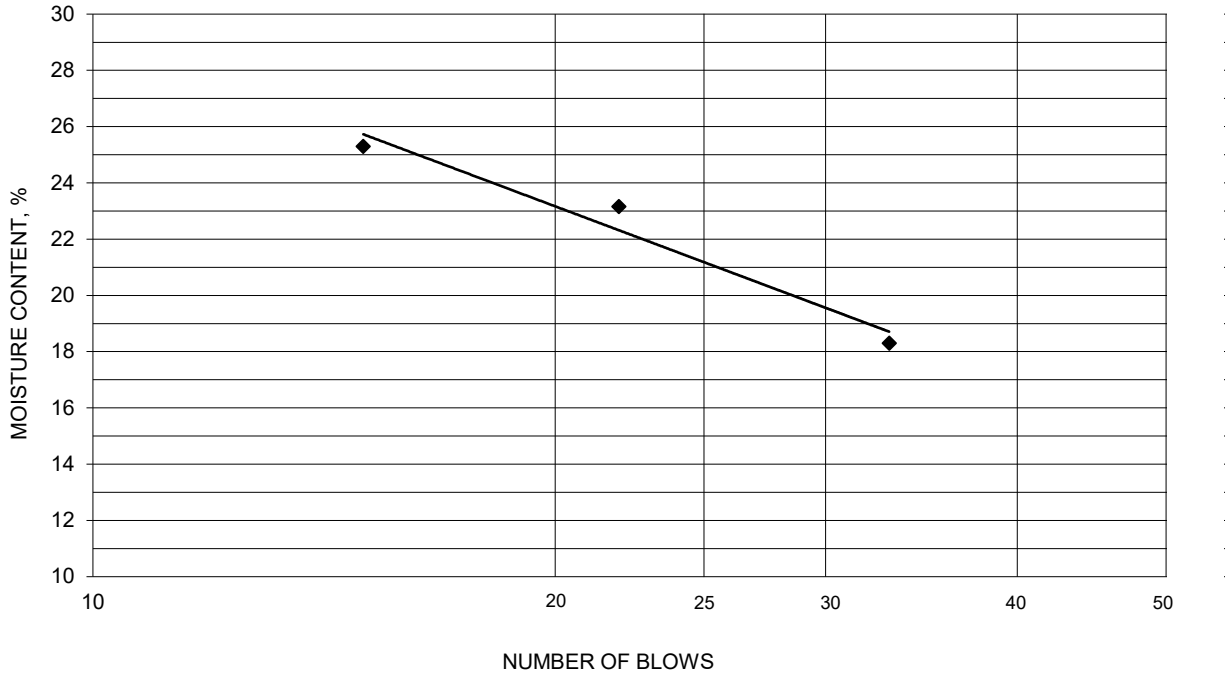
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	Grab			Lab ID	B10-2'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-30-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
25.05	23.28	13.61	33	18.3	
23.06	21.27	13.54	22	23.2	
27.35	24.58	13.63	15	25.3	21

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
20.40	19.60	13.57	13.3	13	8

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B11-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	269.00	Moisture Content (%)	10.8
Initial Oven Dry Sample Mass (g)	242.70		
Final Oven Dry Sample Mass (g)	89.00		
Materials Finer Than 75µm (No. 200) Sieve (g)	153.70		
Percent Finer Than 75µm (No. 200) Sieve (%)	63.3		

Comments

Reviewed By JF

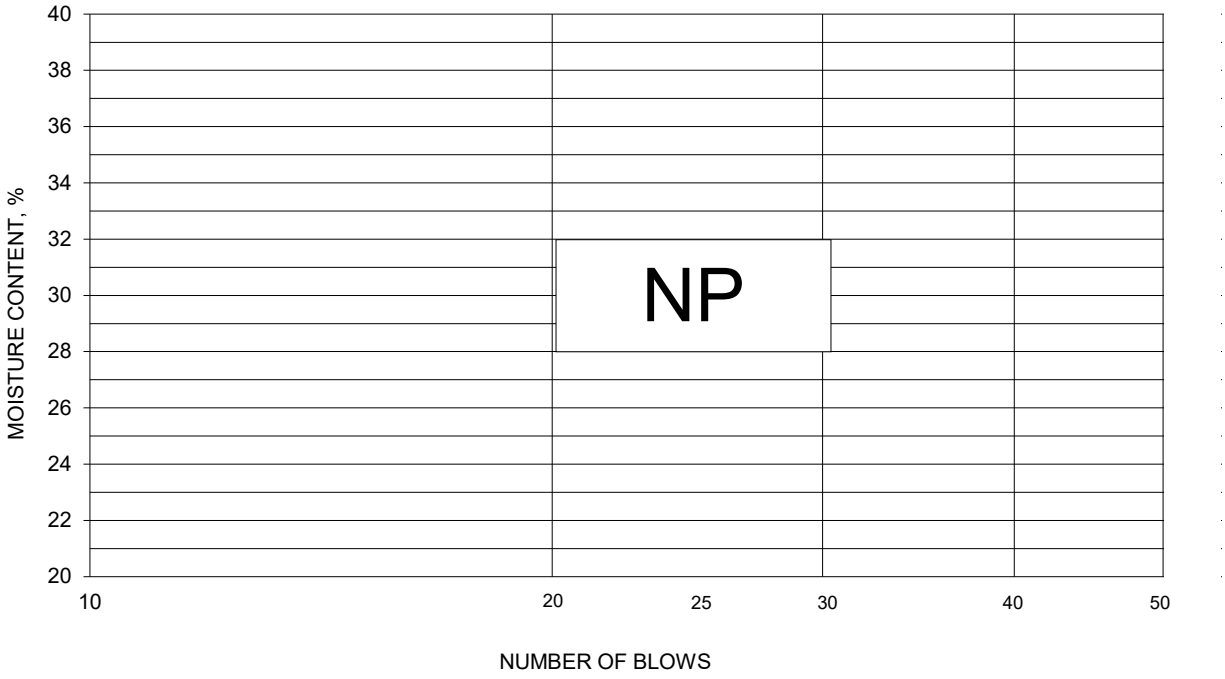
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	Grab			Lab ID	B11-2'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	10
Test Date	12-30-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
					0

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index

Remarks:

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	SPT	Lab ID	B11-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	261.10	Moisture Content (%)	10.4
Initial Oven Dry Sample Mass (g)	236.60		
Final Oven Dry Sample Mass (g)	144.44		
Materials Finer Than 75µm (No. 200) Sieve (g)	92.16		
Percent Finer Than 75µm (No. 200) Sieve (%)	39.0		

Comments

Reviewed By JF

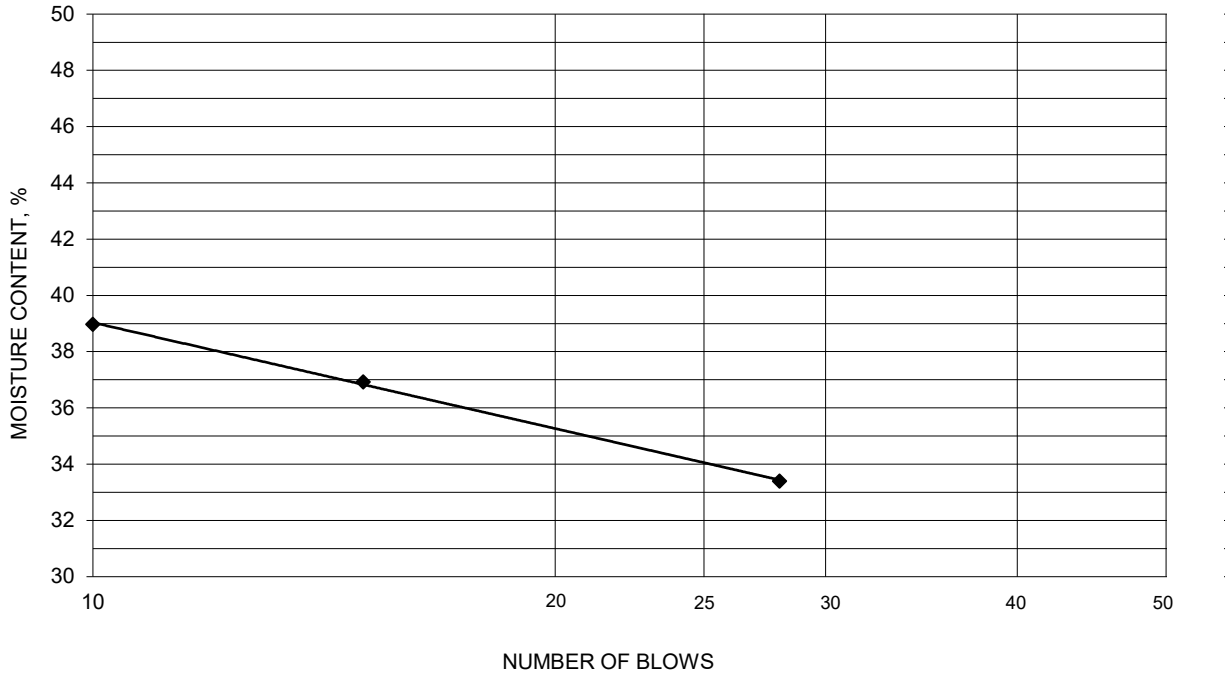
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	SPT			Lab ID	B11-5'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-26-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
20.47	18.84	13.96	28	33.4	
22.89	20.49	13.99	15	36.9	
25.78	22.35	13.55	10	39.0	34

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
22.17	20.77	13.63	19.6	20	14

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Materials Finer Than 75µm (No. 200) Sieve

ASTM D 1140

Project Name	8me Rexford	Project Number	185704733
Source	CM	Lab ID	B14-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Test Date	12-24-2019

Initial Sample Wet Mass (g)	251.00	Moisture Content (%)	11.3
Initial Oven Dry Sample Mass (g)	225.60		
Final Oven Dry Sample Mass (g)	144.10		
Materials Finer Than 75µm (No. 200) Sieve (g)	81.50		
Percent Finer Than 75µm (No. 200) Sieve (%)	36.1		

Comments

Reviewed By JF

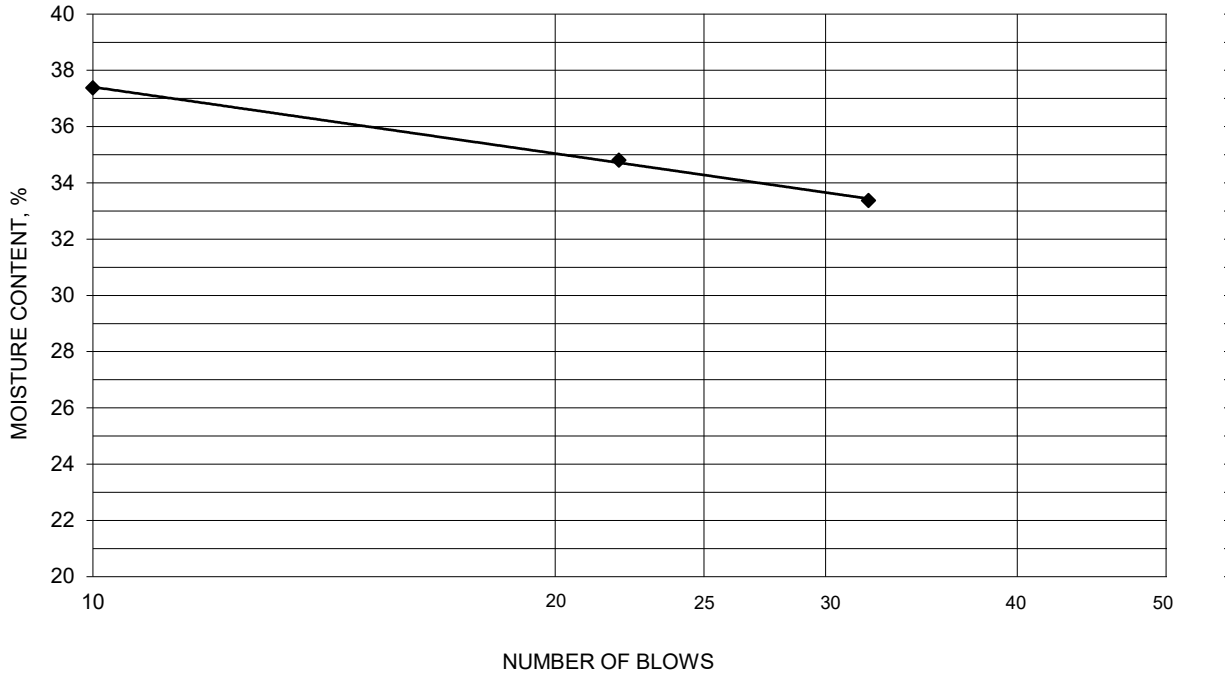
Stantec

ATTERBERG LIMITS

Project	8me Rexford			Project No.	185704733
Source	CM			Lab ID	B14-5'
Tested By	M.P.	Test Method	ASTM D 4318	% + No. 40	20
Test Date	12-27-2019	Prepared	Dry	Date Received	12-19-2019

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Number of Blows	Water Content (%)	Liquid Limit
23.34	20.87	13.47	32	33.4	
21.66	19.61	13.72	22	34.8	
22.39	20.05	13.79	10	37.4	34

Liquid Limit



PLASTIC LIMIT AND PLASTICITY INDEX

Wet Soil and Tare Mass (g)	Dry Soil and Tare Mass (g)	Tare Mass (g)	Water Content (%)	Plastic Limit	Plasticity Index
19.65	18.86	13.67	15.2	15	19

Remarks: USCS Soil Type = CL

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185714733
Source	Grab	Lab ID	B1-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	336.70	Analysis based on total sample.	
Moisture Content (%)	3.7		

Sieve Size	Grams Retained	% Retained	% Passing
1/2"	22.60	6.7	93.3
3/8"	21.90	6.5	86.8
No. 4	89.60	26.6	60.2
No. 8	26.50	7.9	52.3
No. 16	19.20	5.7	46.6
No. 30	18.20	5.4	41.2
No. 50	27.50	8.2	33.0
No. 100	30.20	9.0	24.1
No. 200	7.70	2.3	21.8
Pan	73.30	21.8	---

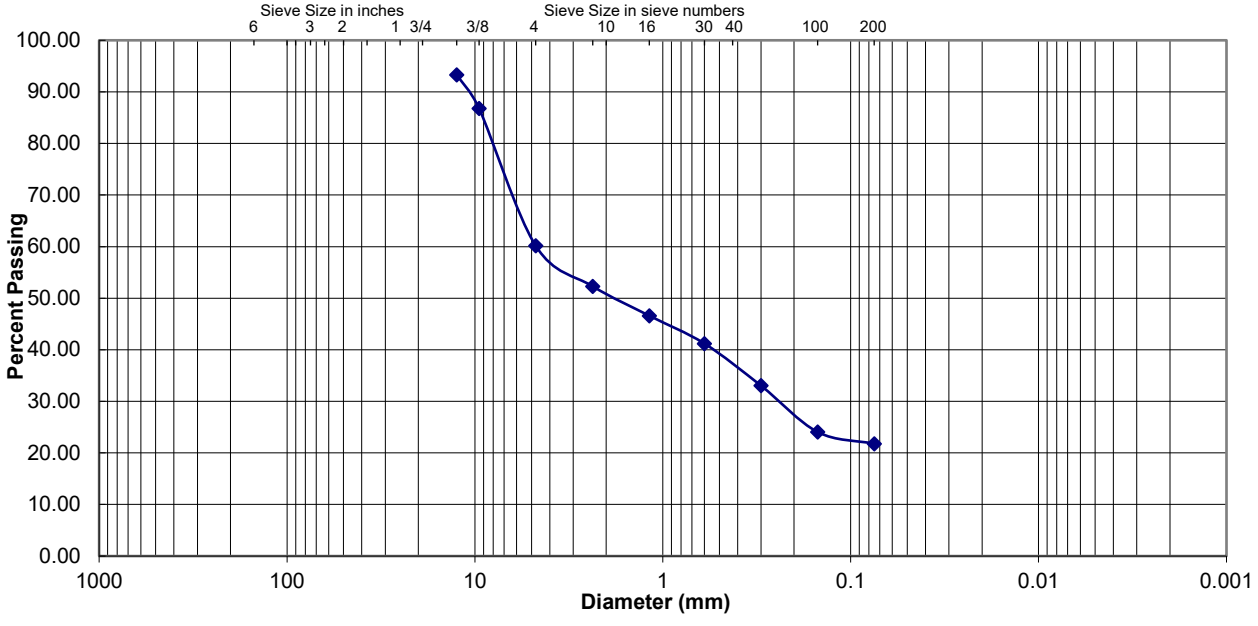
% Gravel	39.8
% Sand	38.4
% Fines	21.8
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Gravel (GC) with Sand

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185704733
Source	CM	Lab ID	B2-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	220.90	Analysis based on total sample.	
Moisture Content (%)	9.6		

Sieve Size	Grams Retained	% Retained	% Passing
1/2"	6.70	3.0	97.0
3/8"	25.30	11.5	85.5
No. 4	19.30	8.7	76.8
No. 8	25.30	11.5	65.3
No. 16	17.70	8.0	57.3
No. 30	16.20	7.3	50.0
No. 50	25.70	11.6	38.3
No. 100	65.80	29.8	8.6
No. 200	14.70	6.7	1.9
Pan	4.20	1.9	---

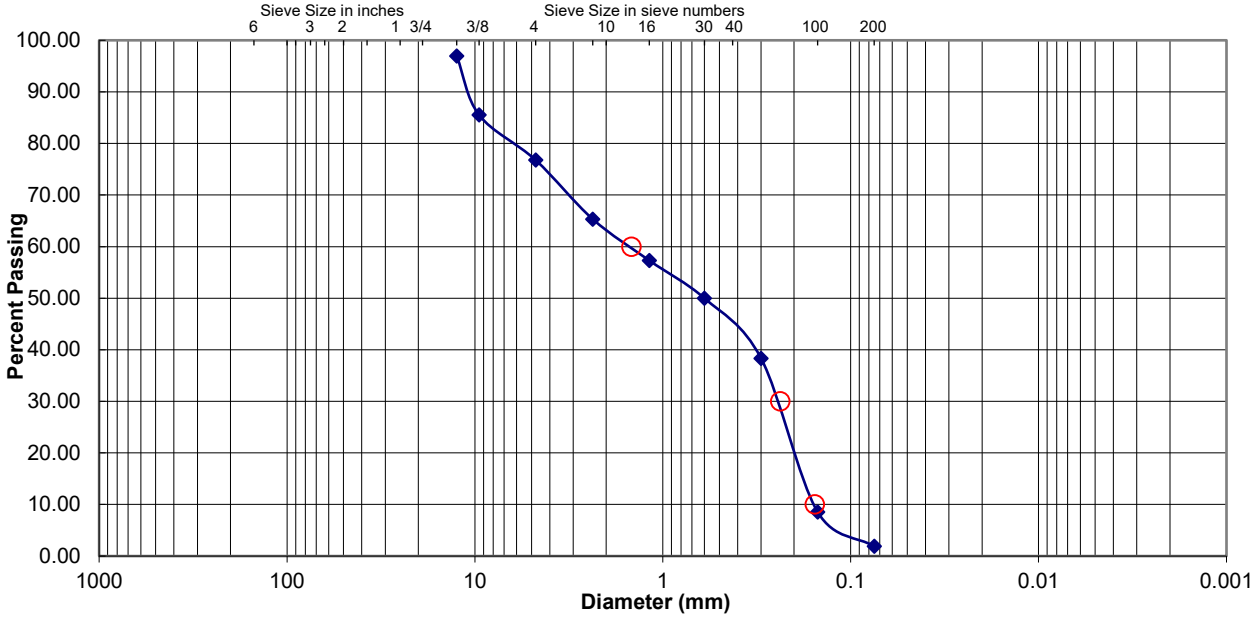
% Gravel	23.2
% Sand	74.9
% Fines	1.9
Fines Classification	CL
D_{10} (mm)	0.1551
D_{30} (mm)	0.2371
D_{60} (mm)	1.4690
Cu	9.47
Cc	0.25

Classification

Poorly Graded Sand (SP) with Gravel

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B3-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	298.60	Analysis based on total sample.	
Moisture Content (%)	9.8		

Sieve Size	Grams Retained	% Retained	% Passing
1/2"	9.20	3.1	96.9
3/8"	0.00	0.0	96.9
No. 4	11.10	3.7	93.2
No. 8	30.70	10.3	82.9
No. 16	42.00	14.1	68.9
No. 30	49.30	16.5	52.3
No. 50	65.70	22.0	30.3
No. 100	21.80	7.3	23.0
No. 200	7.20	2.4	20.6
Pan	61.60	20.6	---

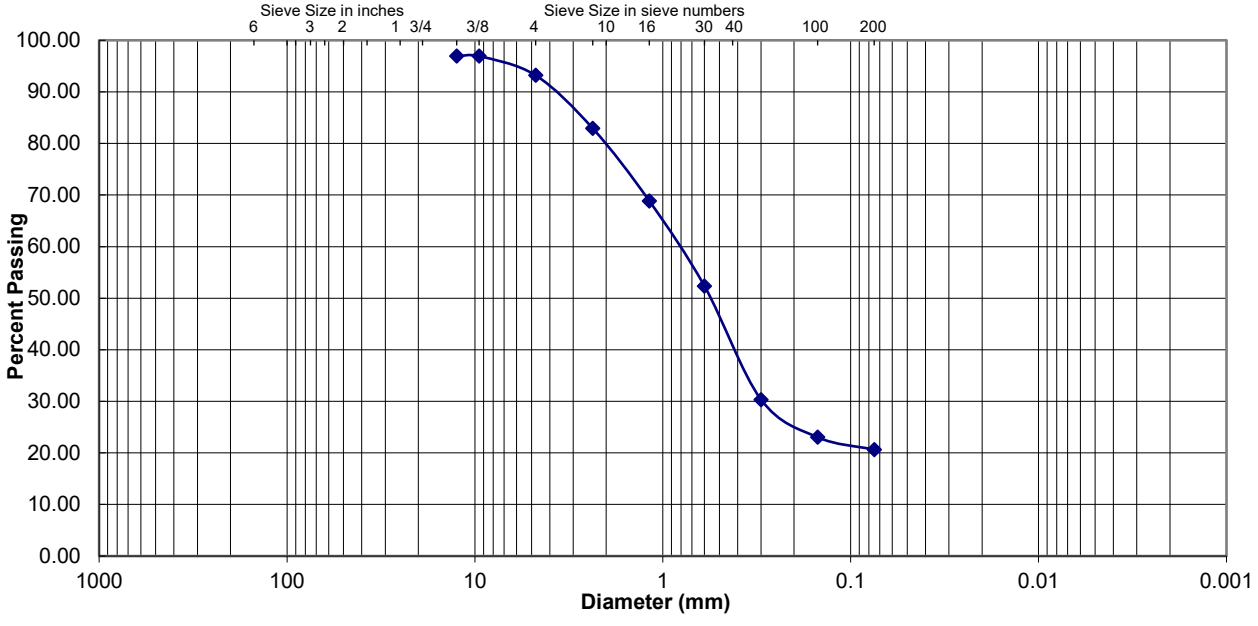
% Gravel	6.8
% Sand	72.6
% Fines	20.6
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185704733
Source	CM	Lab ID	B3-7'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	264.40	Analysis based on total sample.	
Moisture Content (%)	5.9		

Sieve Size	Grams Retained	% Retained	% Passing
No. 4	16.10	6.1	93.9
No. 8	48.70	18.4	75.5
No. 16	54.00	20.4	55.1
No. 30	43.30	16.4	38.7
No. 50	51.80	19.6	19.1
No. 100	15.90	6.0	13.1
No. 200	7.00	2.6	10.4
Pan	27.60	10.4	---

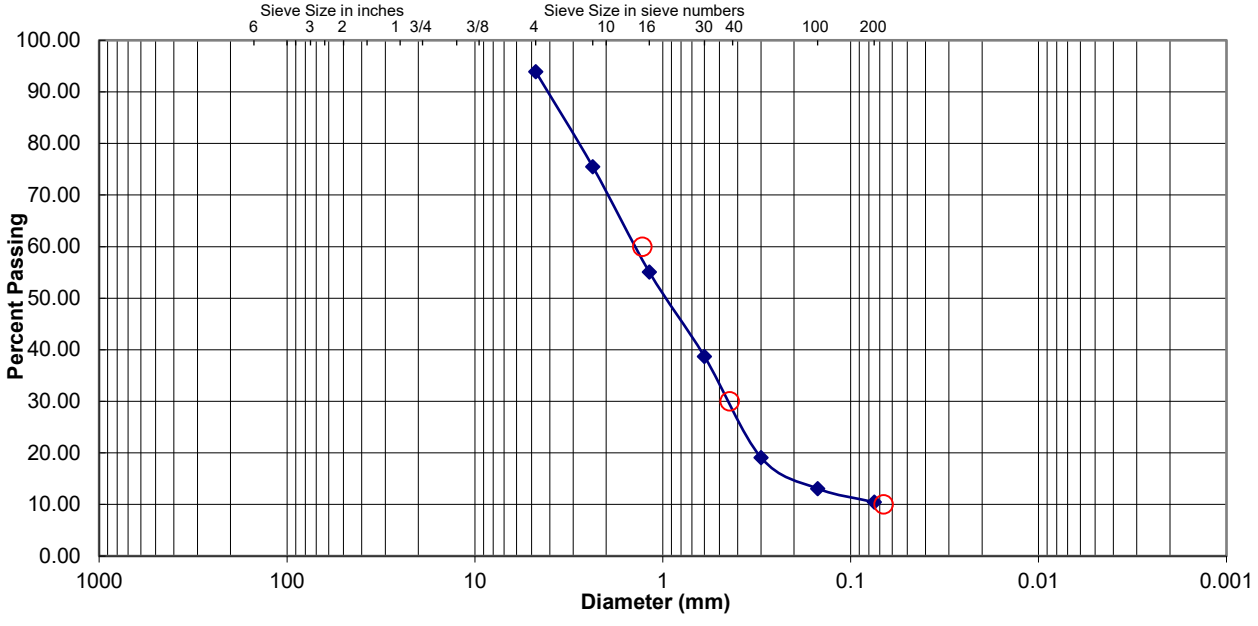
% Gravel	6.1
% Sand	83.5
% Fines	10.4
Fines Classification	CL
D_{10} (mm)	0.0669
D_{30} (mm)	0.4412
D_{60} (mm)	1.2850
Cu	19.22
Cc	2.27

Classification

Well Graded Sand (SW-SC) with Clay

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185704733
Source	Grab	Lab ID	B4-2'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	310.80	Analysis based on total sample.	
Moisture Content (%)	8.6		

Sieve Size	Grams Retained	% Retained	% Passing
3/8"	5.60	1.8	98.2
No. 4	1.20	0.4	97.8
No. 8	12.90	4.2	93.7
No. 16	40.10	12.9	80.8
No. 30	40.40	13.0	67.8
No. 50	42.90	13.8	54.0
No. 100	43.70	14.1	39.9
No. 200	30.50	9.8	30.1
Pan	93.50	30.1	---

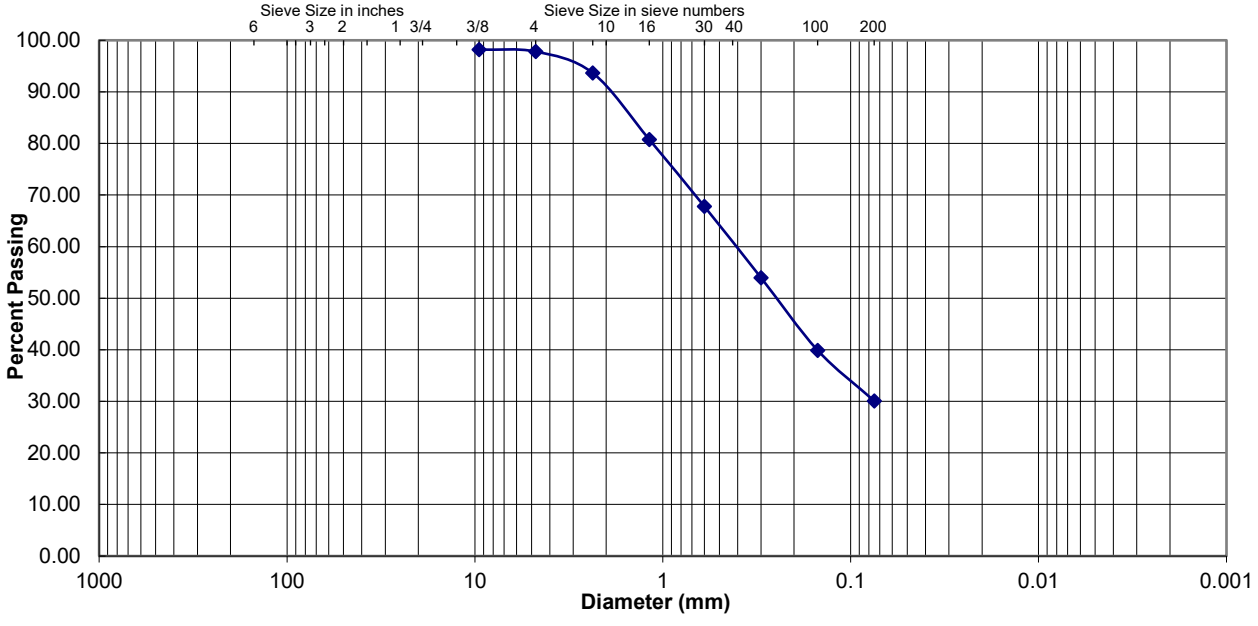
% Gravel	2.2
% Sand	67.7
% Fines	30.1
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185714733
Source	CM	Lab ID	B4-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	364.10	Analysis based on total sample.	
Moisture Content (%)	11.1		

Sieve Size	Grams Retained	% Retained	% Passing
3/8"	3.40	0.9	99.1
No. 4	3.40	0.9	98.1
No. 8	15.90	4.4	93.8
No. 16	45.80	12.6	81.2
No. 30	73.20	20.1	61.1
No. 50	84.90	23.3	37.8
No. 100	31.40	8.6	29.1
No. 200	10.60	2.9	26.2
Pan	95.50	26.2	---

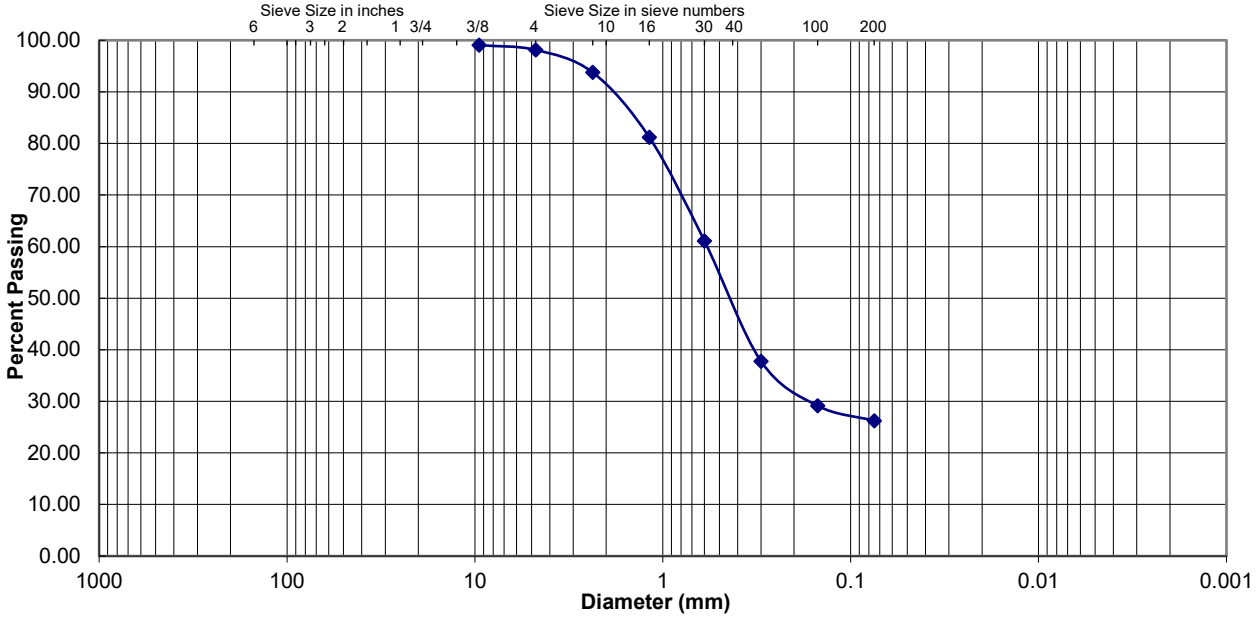
% Gravel	1.9
% Sand	71.9
% Fines	26.2
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185714733
Source	CM	Lab ID	B8-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	248.00	Analysis based on total sample.	
Moisture Content (%)	6.2		

Sieve Size	Grams Retained	% Retained	% Passing
No. 4	14.20	5.7	94.3
No. 8	32.30	13.0	81.3
No. 16	42.90	17.3	64.0
No. 30	44.40	17.9	46.0
No. 50	42.90	17.3	28.8
No. 100	27.10	10.9	17.8
No. 200	7.70	3.1	14.7
Pan	36.50	14.7	---

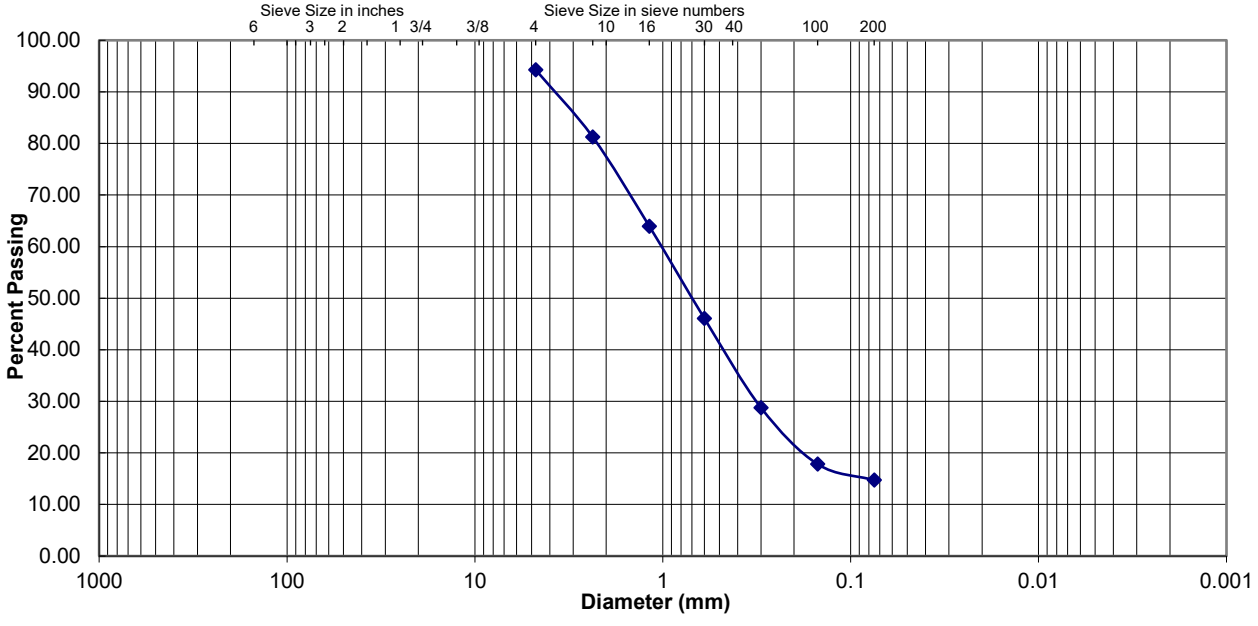
% Gravel	5.7
% Sand	79.6
% Fines	14.7
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185704733
Source	SPT	Lab ID	B9-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	263.80	Analysis based on total sample.	
Moisture Content (%)	10.2		

Sieve Size	Grams Retained	% Retained	% Passing
3/8"	10.50	4.0	96.0
No. 4	1.10	0.4	95.6
No. 8	1.90	0.7	94.9
No. 16	4.90	1.9	93.0
No. 30	16.60	6.3	86.7
No. 50	55.90	21.2	65.5
No. 100	51.30	19.4	46.1
No. 200	32.50	12.3	33.8
Pan	89.10	33.8	---

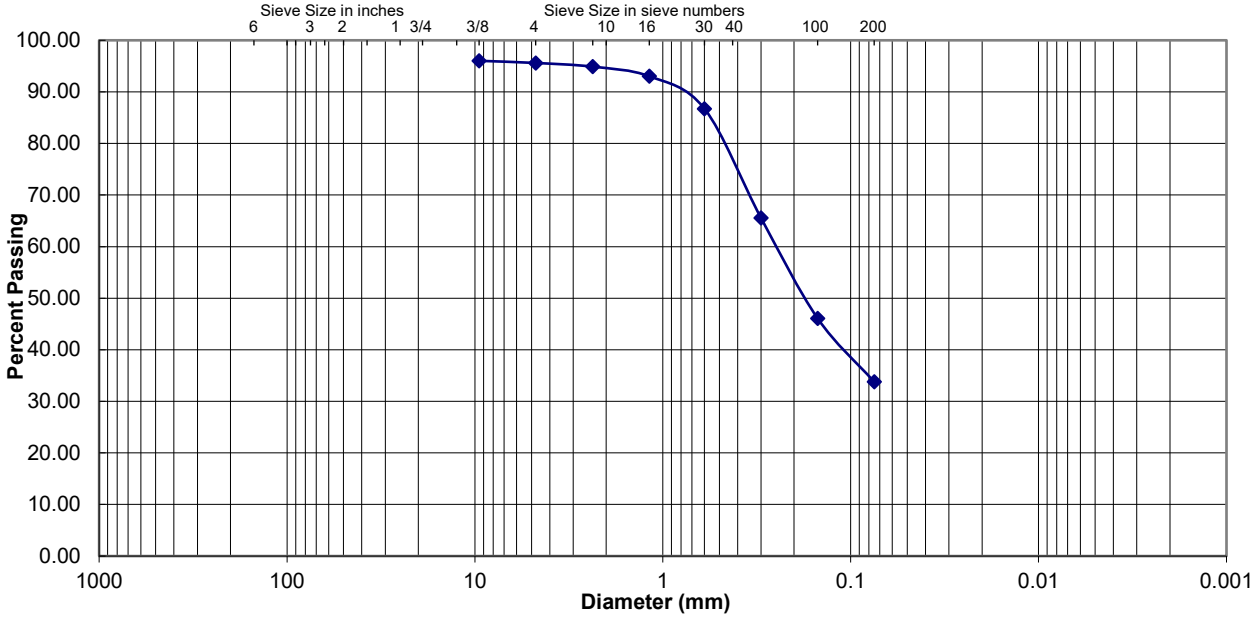
% Gravel	4.4
% Sand	61.8
% Fines	33.8
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185704733
Source	CM	Lab ID	B12-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	265.50	Analysis based on total sample.	
Moisture Content (%)	6.5		

Sieve Size	Grams Retained	% Retained	% Passing
No. 4	2.10	0.8	99.2
No. 8	11.50	4.3	94.9
No. 16	29.50	11.1	83.8
No. 30	37.00	13.9	69.8
No. 50	41.90	15.8	54.0
No. 100	33.80	12.7	41.3
No. 200	22.90	8.6	32.7
Pan	86.80	32.7	---

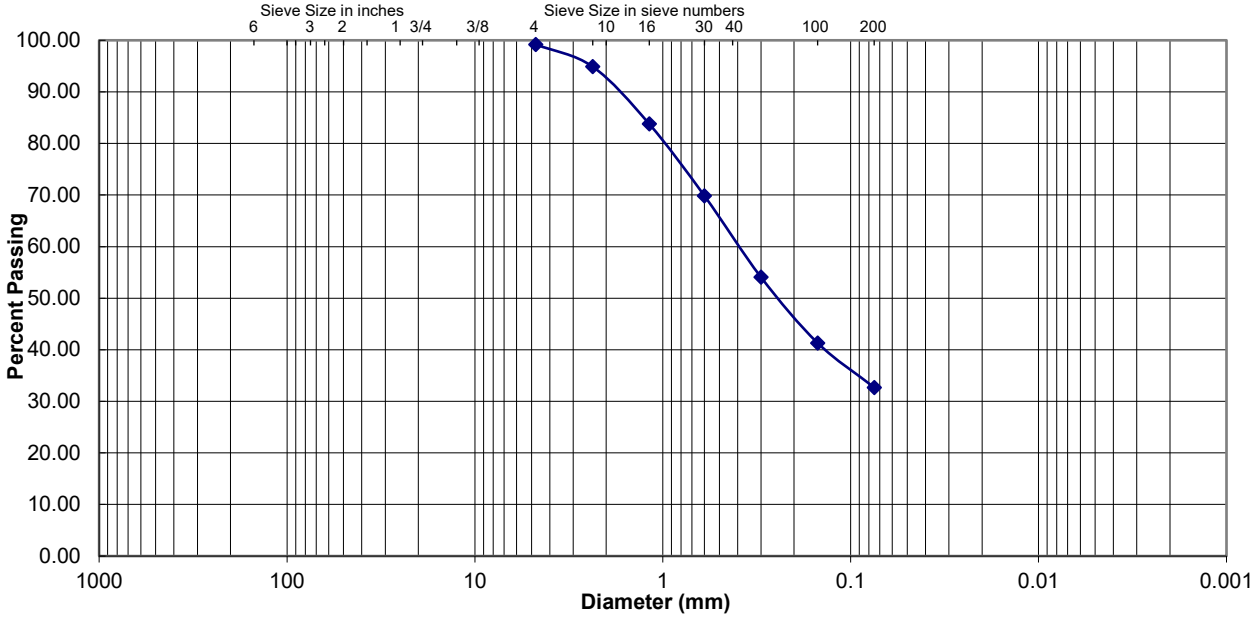
% Gravel	0.8
% Sand	66.5
% Fines	32.7
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185714733
Source	SPT	Lab ID	B13-5'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	216.00	Analysis based on total sample.	
Moisture Content (%)	15.7		

Sieve Size	Grams Retained	% Retained	% Passing
No. 4	3.30	1.5	98.5
No. 8	13.10	6.1	92.4
No. 16	35.60	16.5	75.9
No. 30	31.40	14.5	61.4
No. 50	27.80	12.9	48.5
No. 100	31.70	14.7	33.8
No. 200	19.00	8.8	25.0
Pan	54.10	25.0	---

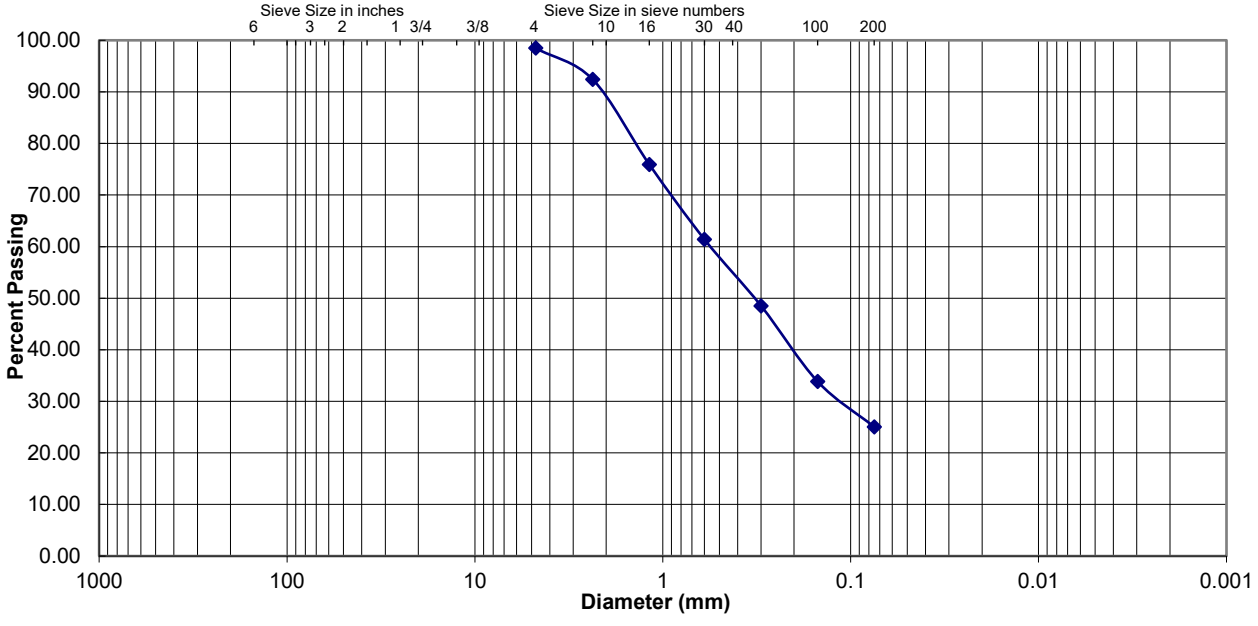
% Gravel	1.5
% Sand	73.4
% Fines	25.0
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Stantec

Gradation Analysis

ASTM D 422

Project Name	8me Rexford	Project Number	185714733
Source	CM	Lab ID	B13-7'
		Date Received	12-19-2019
Preparation Method	ASTM D 1140 Method A	Preparation Date	12-22-2019
Particle Shape		Test Date	12-23-2019
Particle Hardness			
Sample Dry Mass (g)	229.60	Analysis based on total sample.	
Moisture Content (%)	9.8		

Sieve Size	Grams Retained	% Retained	% Passing
3/8"	4.10	1.8	98.2
No. 4	3.40	1.5	96.7
No. 8	8.20	3.6	93.2
No. 16	22.90	10.0	83.2
No. 30	31.60	13.8	69.4
No. 50	38.50	16.8	52.7
No. 100	32.50	14.2	38.5
No. 200	18.70	8.1	30.4
Pan	69.70	30.4	---

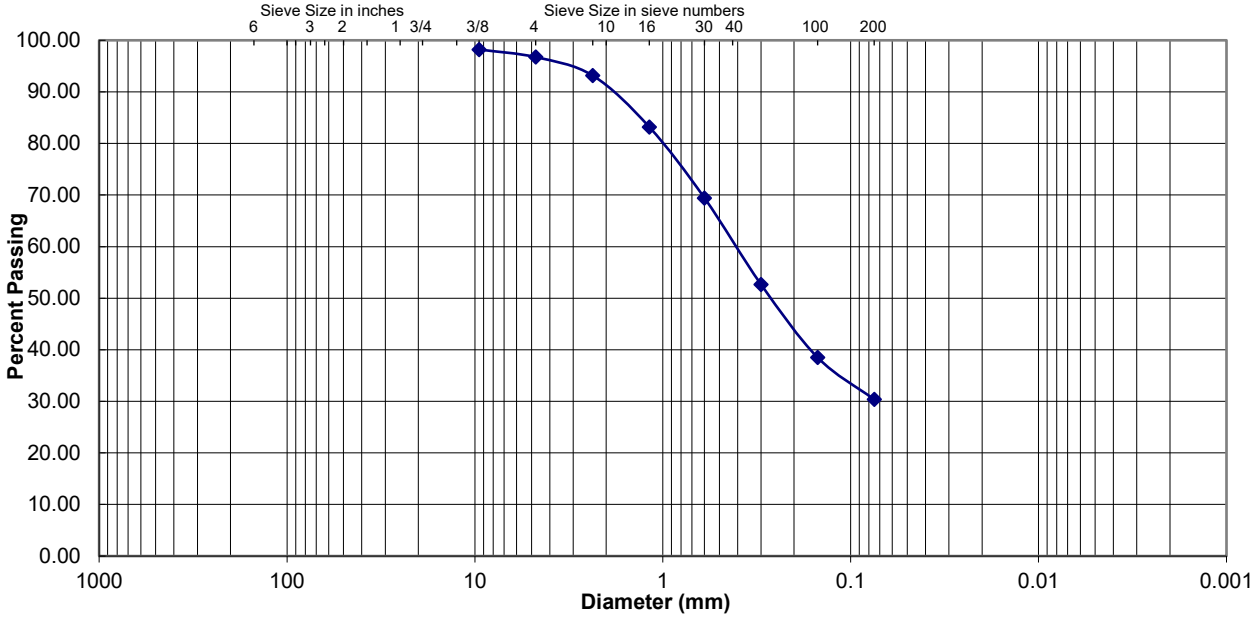
% Gravel	3.3
% Sand	66.4
% Fines	30.4
Fines Classification	CL
D_{10} (mm)	N/A
D_{30} (mm)	N/A
D_{60} (mm)	N/A
Cu	N/A
Cc	N/A

Classification

Clayey Sand (SC)

Classification determined by ASTM D 2487. -200 material classification determined by visual assessment, ASTM D 2488.

Particle Size Distribution



Comments

Reviewed By JF

Appendix C CEQA GUIDELINES FORM – GEOLOGY AND SOILS

Appendix C CEQA Guidelines form – Geology and Soils

GEOLOGY AND SOILS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
Would the project:					
a) Expose people or structures to 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 CDMG Special Publication 42)?			X		
ii) Strong Seismic ground shaking?		X			
iii) Seismic-related ground failure, including liquefaction?			X		
iv) Landslides?			X		
b) Result in substantial soil erosion or the loss of topsoil?		X			
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?			X		
d) Be located on expansive soil, as identified in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for disposal of waste water?			X		

APPENDIX G
PHASE I ESA

TECHNICON
ENGINEERING SERVICES, INC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
REXFORD SOLAR FARM
TULARE COUNTY, CALIFORNIA

Prepared For and Submitted To:

20SD 8me LLC
5455 Wilshire Boulevard, Suite 2010
Los Angeles, California 90036

February 4, 2020

TES#: 190662.003

GEOTECHNICAL & ENVIRONMENTAL ENGINEERING • CONSTRUCTION TESTING & INSPECTION

TECHNICON
ENGINEERING SERVICES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERING ▲ CONSTRUCTION TESTING & INSPECTION

February 4, 2020 TES#: 190662.003

20SD 8me LLC
Mr. Thomas Buttgenbach
5455 Wilshire Boulevard, Suite 2010
Los Angeles, California 90036

RE: Phase I Environmental Site Assessment
Rexford Solar Farm
Tulare County, California

Mr. Buttgenbach:

In accordance with your request and authorization, Technicon Engineering Services, Inc. (Technicon), has performed a Phase I Environmental Site Assessment of the above-referenced site in conformance with the scope and limitations of ASTM Practice E-1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. The results of the investigation are detailed in the attached report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) or records of environmental liens in connection with the property.

We appreciate the opportunity to assist you with your project. If you should have questions or require additional information, please contact us at (559) 276-9311.

Respectfully,
TECHNICON Engineering Services, Inc.

Jim Vue, GIT
Staff Geologist

Steve Curra, PG
Environmental Engineering Division Manager

PROFESSIONAL GEOLOGIST
STEVEN CURRA
No. 7172
12-31-21
STATE OF CALIFORNIA

CORPORATE OFFICE ▲ 4539 N. Brawley Avenue #108, Fresno, CA 93722 ▲ P 559.276.9311 ▲ F 559.276.9344
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PHASE I ENVIRONMENTAL SITE ASSESSMENT
REXFORD SOLAR FARM
TULARE COUNTY, CALIFORNIA

1.0 SUMMARY

We have performed a Phase l Environmental Site Assessment of the Site in conformance with the scope and limitations of ASTM Practice E-1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report.

The subject site is comprised of 38 parcels and portions of three other parcels encompassing approximately 3,647 acres of agricultural and grazing land clustered around Ducor in Tulare County, California. Rural residences and associated barns, shops, pole barns, and other outbuildings occupy some of the parcels. Pole- and pad-mounted transformers, irrigation wells, a temporary abandoned irrigation well, an unlined reservoir, and aboveground storage tanks are also located on the Site. The parcels are connected by approximately 12.5 miles of proposed gen-tie collector line corridors.

From sometime prior to 1937 to present day, the subject site has consisted predominantly of agricultural land. The present-day residences and associated outbuildings had been constructed on the Rodriguez Parcel and Carlisle Parcel. The present-day Union Pacific railroad occupies portions of the proposed gen-tie collector line corridors and extends off-site. By 1969, the existing reservoir had been constructed on the Burum Parcel. By 1994, the existing pole barn had been constructed on the Trueblood West Parcel. By 2006, the other existing pole barn was constructed on the Trueblood East Parcel.

The proposed gen-tie collector line corridors crosses and follows the Union Pacific railroad easement. Railroad companies have reportedly used pesticides and herbicides in concentrations higher than those that are general used in agricultural applications. It is possible that herbicides containing arsenic or other environmentally persistent residues may have been used to control weed growth along the railroad easement. However, it has been reported that the proposed gen-tie corridor has been “engineered to completely avoid disturbance within the Union Pacific right-of-way and has no legal right to ground disturbance within the Union Pacific railroad easement.” It is not anticipated that the Site would be adversely impacted by the Union Pacific railroad easement.

This assessment has revealed no evidence of recognized environmental conditions (RECs) or records of environmental liens in connection with the property. Although not considered RECs, Technicon does note the following:

- Three irrigation wells are located on the northern half of the Site. One of the irrigation well was reported as non-operational (Figure 2). Technicon recommends that the non-operational irrigation well be either temporarily abandoned or destroyed in accordance with state and local regulations.

- Two oil/gas wells identified on the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) are located on the Carlisle North Parcel. During the process of drilling, completing and producing the on-site oil/gas wells, there is a potential for soil and/or groundwater impact by wastes which are discharged to earthen sumps, leaking crude oil tanks, crude oil spillage during gathering operations, and leaking casing or pipelines. It is unknown if the soils at the Site were impacted by the oil field operations.

- The residences and associated outbuildings on the Site were constructed before the 1978 ban on the manufacture of friable asbestos containing materials. Therefore, asbestos-containing construction materials may be present in the building materials used for their construction. An asbestos survey was not conducted as part of this investigation, but it is recommended prior to any demolition or modification of this structure.

The following are data gaps encountered during this assessment:

- As of the date of this report, interviews with some of the property owners in regards to the site history has not been completed. Due to this, Technicon was not able to fully inspect the on-site residences and associated outbuildings.

2.0 INTRODUCTION

In accordance with the request of Mr. Venai Shenoy and authorization of Mr. Thomas Buttgenbach of 20SD 8me LLC, TECHNICON Engineering Services, Inc. (Technicon) has conducted a Phase I Environmental Site Assessment (ESA) of the above-referenced Site. The following sections present a description of the Site and vicinity, available information obtained during this investigation, and our evaluations.

2.1 Objective

The purpose and objective of this investigation was to evaluate existing or potential environmental impacts at or near the Site and to permit the user to satisfy one of the requirements to qualify for the “innocent landowner defense” to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability: that is the practices that constitute “all appropriate inquiry into the previous uses and ownership of the property consistent with good commercial or customary practices” as defined in 42 USC Section 9601 (35)(B). This practice may also qualify the user for protections under the bona fide prospective purchaser defense and the contiguous property owner

defense to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability.

The goal of the processes established by this practice is to identify recognized environmental conditions (RECs), meaning "presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The goal is to also identify any historical recognized environmental conditions (HRECs), meaning past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls, or controlled recognized environmental conditions (CRECs), which are defined as recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority.

2.2 Scope of Services

The Phase I Investigation consisted of, but was not limited to, a visual inspection of the Site and surrounding properties, a review of available regulatory agency records and permits, aerial photographs, and interviews with persons knowledgeable of the Site. The investigation was conducted in general accordance with the guidelines presented in American Society of Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-13.

The Phase I ESA included a site reconnaissance, interviews with parties knowledgeable regarding the history of the site, review of regulatory agency records, review of historical records including aerial photographs to establish a site history to the earliest development of the site, and preparation of a report detailing the findings of the ESA including any recognized environmental conditions potentially affecting the site.

2.3 Significant Assumptions

Technicon assumes that all information provided by regulatory agencies and the database provider is accurate and reliable to the extent implied.

2.4 Limitations and Exceptions

The objective of this investigation was to evaluate existing or potential environmental impacts due to the present or past usage or storage of hazardous materials or substances at or near the Site. The performance of this investigation does not certify or guarantee that the subject property is free of environmental impacts or hazardous materials, but rather presents our opinion as to the potential for such impacts to exist. The conclusions presented herein regarding the environmental integrity of the property are based on the observations and information gathered during the investigation. Many of the regulatory agency records and databases researched are several months to several years in age and may not accurately reflect current conditions or information, but, these records are the most up-to-date information available from the regulatory agencies.

The focus of the ESA was to assess the potential for hazardous materials impact to the Site resulting from previous and current uses of the Site and nearby properties. As a result, this assessment does not address the presence of the following conditions unless they were specifically requested as part of the scope of work.

1. Naturally-occurring toxic or hazardous materials in the subsurface soils and water.
2. Potential effects of products commonly present on inhabited properties, such as household products, building materials, and consumer goods.
3. Constituents or contaminant concentrations that are not currently regulated but may be regulated under future statutes.

It must also be recognized that a Phase I Environmental Site Assessment is intended for the purpose of determining site conditions through limited research and investigation and can in no way be considered a conclusive site characterization. Furthermore, this document shall not be interpreted to relieve any party of its responsibility to abide by applicable laws, codes, and regulations.

2.5 User Reliance

The Phase I ESA was prepared for, is the property of, and is intended for the sole use of 20SD 8me LLC, its successors and agents.

3.0 SITE DESCRIPTION & PHYSICAL SETTING

The Site location and vicinity are presented in Figure 1 (Vicinity Map). According to the U.S. Geological Survey 7.5 Minute Richgrove, California, topographic quadrangle map, dated 1952, photo revised 1973, USGS 7.5 Minute Ducor, California, topographic quadrangle map, dated 1952, photo revised 1969, and USGS 7.5 Minute Fountain Springs, California, topographic map, dated 1965, the Site occupies portions of Sections 22, 25, 26, 28, 29, 35, and 36 of Township 23 South and portions of Sections 10, 15, 16, 17, and 21 of Township 24 South, Range 27 East and portions of Sections 31 and 32 of Township 23 South, Range 28 East, Mount Diablo Baseline and Meridian. The site elevation ranges from approximately 480 feet above mean sea level (msl) in the western portion of the Site to approximately 680 feet above msl in the eastern portion of the Site.

The subject site is comprised of all of 38 parcels and portions of three other parcels and encompasses approximately 3,647 acres of agricultural and grazing land clustered around Ducor in Tulare County, California. Rural residences and associated barns, shops, pole barns, and other outbuildings occupy some of the parcels. Pole- and pad-mounted transformers, irrigation wells, a temporary abandoned irrigation well, an unlined reservoir, and aboveground storage tanks are also located on the Site. The parcels are connected by approximately 12.5 miles of proposed gen-tie collector line corridors.

3.1 Assessors Records / User Provided Information

The Tulare County Assessor's Parcel Numbers (APNs), address, owners, and acreages are included in the following table.

APN	Address	Owner	Acres	Parcel ID
321-140-007	n/a	Carlisle Family Limited Partnership	20	Carlisle North Parcel
321-140-008			5	
321-140-010			5	
321-140-012			7.2	
321-140-013			9.4	
321-140-014			20	
321-140-015			157.58	
321-130-005			99.7	
321-120-002			160	
321-120-004			155.89	
321-110-016			14.67	
321-040-007			18.44	
321-040-008			75.5	
321-040-011			13.66	
321-040-025			32.63	
321-120-005	23160 Avenue 64	Jorge Rodriguez	1.21	Rodriguez Parcel
321-210-004	n/a	Linda Zimmerman	120	Zimmerman East Parcel
321-200-006			200 of 260.2	Zimmerman West Parcel
321-190-002			40 of 60.26	
321-190-001			160 of 241	
321-070-026		Donald Trueblood	160	Trueblood West Parcel
323-040-006			160	Trueblood East Parcels
323-040-007			158.99	
323-040-008			160	
321-070-014		William M Bennett	160	Bennett Parcel
339-050-013	3700 Highway 65	Carlisle Family Limited Partnership	188.43	Carlisle Central Parcel
339-050-008	n/a		38.5	
339-050-007			38.5	
339-050-006			80	
339-050-004			40	
339-080-005		Donald R Hardaway	40.33	Hardaway North Parcel
339-080-016			79.77	Hardaway South Parcel
339-080-015		Marguerite Proctor	79.78	Proctor Parcel
339-080-013			77.73	
339-070-006		GC Nut LLC	106.16	GC Nut Parcel
339-070-016		WA Burum and Son	78.78	Burum Parcel
339-070-015			78.78	
339-070-014			89.38	
339-110-009		Juan Avalos	39.86	Avalos Parcel
339-110-008			77.97	
339-110-001		Carlisle Family Limited Partnership	397.75	Carlisle South Parcel

An ASTM User Questionnaire for Phase I Environmental Site Assessment, completed by Mr. Venai Shenoy, Director of Development for 20SD 8me LLC, was received on January 29, 2020. According to information provided on the User Questionnaire, Mr. Shenoy indicated that there are no known environmental cleanup liens or activity or land use limitations recorded or in place for the Site. The User stated that he has no specialized knowledge and experience related to the property that would assist in the preparation of the ESA. Mr. Shenoy indicated that the Site reflects the fair market value. A copy of the user provided information is presented in Appendix C of this report.

3.2 Groundwater Conditions

The area of the Site is generally underlain by groundwater occurring in unconfined, perched, and semi-confined conditions. Within the Central Valley, regional movement of ground water is toward a topographic trough located on the western side of the valley, and from there, toward the north to the Sacramento River-Delta region.

The local groundwater table elevation fluctuates in the area of the Site. This is caused by ground water pumping for municipal and agricultural use and by groundwater recharge from rivers, canals, and ponding basins. According to the California Department of Water Resources (DWR) GIS data dated Fall 2018, groundwater in the vicinity of the southern portion of the subject site flows generally to the northwest and would be encountered at a depth ranging from approximately 470 to 400 feet below ground surface.

4.0 ENVIRONMENTAL RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the property. ASTM standard and additional environmental records were obtained from Environmental Data Resources Inc. (EDR) of Milford, Connecticut. Standard environmental records are those from federal and approximately equivalent state agencies. Additional records are those that can enhance and supplement the standard environmental record sources and generally can be obtained from local governmental and non-governmental agencies. The EDR Radius Map Report is attached in Appendix B.

For those listed sites where the EDR-provided records are not sufficient to identify a listed site's potential impact to the Property, Technicon obtained and reviewed reasonably ascertainable records of the listed site from the appropriate "Additional Environmental Record Source" presented in Section 4.2.

4.1 Standard Environmental Record Sources

This section identifies record information that was reviewed from standard federal and state agency sources. Listed sites are grouped according to their ASTM-recommended approximately minimum search distance.

4.1.1 1-Mile Approximate Minimum Search Distance

Federal NPL

The National Priority List (NPL) sites are United States Environmental Protection Agency (EPA) sites on the CERCLIS list of uncontrolled or abandoned hazardous waste sites for priority cleanup under the Superfund Program. Also listed are Proposed NPL and NPL Liens-listed sites.

- *There are **no** sites identified on or within a one-mile radius of the Site.*

Response (State/Tribal Equivalent NPL)

Response-listed sites identify confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

- *There are **no** sites identified on or within a one-mile radius of the Site.*

RCRA CORRACTS

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

- *There are **no** sites identified on or within a one-mile radius of the Site.*

4.1.2 ½-Mile Approximate Minimum Search Distance

Delisted NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425. (e), sites may be deleted from the NPL where no further response is appropriate.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

CERCLIS

Comprehensive Environmental Response, Compensation, and Liability Information System CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. The

EPA is transitioning to the Superfund Enterprise Management System, or SEMS. SEMS includes the same data fields and content as CERCLIS.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

ENVIROSTOR (State/Tribal Equivalent CERCLIS)

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites. Includes Clandestine Drug Lab (CDL) sites.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

CERCLIS NFRAP

CERCLIS No Further Remedial Action Planned. Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

RCRA non-CORRACTS TSD

RCRA - Treatment, Storage and Disposal. RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to

a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

State and Tribal Landfill and/or Solid Waste Disposal Sites

The Solid Waste Information System (SWIS) database contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. Also included are sites listed on the State's Waste Management Unit Database System (WMUDS) and Land Disposal Sites Listing (LDS) and U.S. EPA Open Dump Inventory (ODI) and Indian ODI listings.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

Leaking Underground Storage Tank Sites

The State of California and its Regional Water Quality Control Boards maintains a database of leaking underground storage tanks (LUST) on its Geotracker database. Also included are sites listed on USEPA's leaking underground storage tanks on Indian Land.

- *There are **four** sites identified within a one-half mile radius of the Site.*

  All four of the LUST facilities are listed as "case closed" with no further action and are not expected to impact the subject site.

Spills, Leaks, Investigations & Cleanup (SLIC) Program

In the Spills, Leaks, Investigations & Cleanup (SLIC) Program, the State of California and its Regional Water Quality Control Boards oversee soil and groundwater investigations, corrective actions, and human health risk assessments at sites with current or historic unauthorized discharges, which have adversely affected or threaten to adversely affect waters of the state. Includes Toxic Pits Cleanup Act Sites and Military Cleanup Sites.

- *There is **one** site identified within a one-half mile radius of the Site.*

  ***M. Hure & Son Cold Storage Facility** is adjacent to the west of the Burum Parcel and is listed as "case closed" with no further action. This facility is not expected to impact the Site.*

Voluntary Cleanup Sites

The California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) Voluntary Cleanup Program (VCP) is a database of Brownfield and lower priority sites with either confirmed or unconfirmed releases that allows DTSC to provide investigation and/or

cleanup oversight. Also included are sites listed on the State's School Property Evaluation Program.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

Brownfield Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an online database for Brownfields Grantees to electronically submit data directly to EPA.

- *There are **no** sites identified on or within a one-half mile radius of the Site.*

4.1.3 Property and Adjoining

RCRA Generators List

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA for Large Quantity Generators (LQG), Small Quantity Generators (SQG), and Conditionally Exempt Small Quantity Generators (CESQG). Also includes HAZNET listing of hazardous waste manifests received each year by DTSC.

- *There are **no** RCRA Generators-listed sites identified on or adjacent to the Site.*

Registered Underground Storage Tank (UST) Sites

The California State Water Resources Control Board maintains a database of active underground storage tank (UST) facilities. Also included are sites listed on California's Facility Inventory Database (CA FID), Hazardous Substance Storage Container Database (HIST UST), Statewide Environmental Evaluation and Planning System (SWEEPS), USEPA's Underground Storage Tanks on Indian Land (Indian USTs), and FEMA USTs.

- *There are **four** UST-listed facilities identified adjacent to the Site.*

  ***Harrison**, a historical UST-listed facility with two 550-gallon gasoline USTs recorded to have been used in 1967 is located approximately 500-feet northwest of Carlisle North Parcel. **Raymond S Cambalik**, another historical UST-listed facility with four unknown size USTs is located approximately 100-feet north of the Bennett Parcel. There are no records of UST removal or hazardous releases from Tulare County Environmental Health Services in regards to the Harrison and Raymond S Cambalik facilities. These two facilities are not expected to adversely impact the subject site, however, should a significant release of*

hazardous materials from the facility impact the Site, the responsibility for investigation and remediation would be assigned to the designated responsible party.

***Sun Pacific Farming** and **SoCal Edison – Vestal Substation** are further discussed in Section 4.2.1.*

Registered Above-ground Storage Tank (AST) Sites

The California State Water Resources Control Board maintains a database of active above-ground storage tank (AST) facilities.

- *There is **one** AST-listed facility identified adjacent to the subject site.*

***CED Ducor Solar 1** is located approximately 150 feet north of the GC Nut Parcel. There are no available information of the AST. This facility is not listed in the Tulare County Environmental Health Services records.*

4.1.4 Property Only

Institutional/Engineering Control Registries

US EPA maintains a list of sites with engineering controls which include various forms of caps, building foundations, liners, and treatment methods to eliminate pathways for regulated substances to enter environmental media or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Includes Land Use Control Information System (LUCIS) sites pertaining to former Navy properties.

- *The Site is **not** reported to be subject to engineering or institutional controls.*

ERNS List

The EPA's Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances. Includes U.S. Department of Transportation Hazardous Materials Information Reporting System (HMIRS) sites. Also includes California Hazardous Materials Information Reporting System (CHMIRS) sites.

- *The Site is **not** listed in the ERNS Database.*

4.2 Additional Environmental Records Sources

Additional Environmental Records Sources are generally described as local or regional and are intended to enhance and supplement the standard environmental record sources presented in Section 4.1, above. Records for the subject site and adjoining properties were reviewed at the environmental record sources presented below.

4.2.1 Clandestine Drug Labs

The Department of Toxic Substances Control (DTSC) maintains a listing of clandestine drug lab (CDL) sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

According to the Database, abandoned drug lab wastes, which are wastes in a location away from an actual illegal drug lab where drug lab wastes were abandoned on or adjacent to the Carlisle North Parcel or on the proposed gen-tie collector line corridors. Given the fact that the DTSC did not pursue further cleanup, and that a drug lab was not physically on the Site, the historic presence of these drug lab related wastes is not anticipated to adversely affect the subject site.

4.2.2 Tulare County Environmental Health Services (EHS)

Information on file with the Tulare County Environmental Health Services (EHS) were reviewed to determine if any records of underground storage tanks, hazardous materials handling or releases are on file with their office for the Site and surrounding properties. According to EHS Official and a review of the most recent Tulare County Certified Unified Program Agency (CUPA) List, there are records on file for the adjacent properties.

Sun Pacific Farming
5861 Road 224, Ducor, California (adjacent to Carlisle North Parcel)
According to the EHS records, one soil boring was advanced thru the location of a former UST. Four soil samples were collected at depths ranging from 11 feet to 26 feet. According to the analytical results, no detectable concentrations of gasoline- or diesel-range petroleum were present in the soil samples.

Numerous hazardous material such as diesel, gasoline, motor oil, etc. were stored at this facility. There are no records of any leaks or spills. This facility is not expected to adversely impact the subject site, however, should a significant release of hazardous materials from the facility impact the Site, the responsibility for investigation and remediation would be assigned to the designated responsible party.

SoCal Edison – Vestal Substation
1867 11th Street, Reedley, California (southeast of the Site)
According to the EHD records, one 1,000-gallon gasoline UST was removed from this facility in September 1986. One soil sample was collected beneath the UST. According to the analytical results, no detectable concentrations of gasoline-range petroleum were present in the soil sample. In an EHS letter dated September 11, 1986, the EHS granted a “no further evaluation” status for this facility.

In October 1986, another 1,000-gallon gasoline UST was removed from this facility and one soil sample was collected beneath the UST. According to the analytical results, no detectable concentrations of gasoline-range petroleum were present in the sample. In an EHS letter dated November 10, 1986, the EHS granted a "no further evaluation" status for this facility.

In November 1996, one 1,000-gallon gasoline and one 1,000-gallon diesel USTs were removed from this facility. One soil sample was collected beneath each of the USTs and fuel dispenser. According to the analytical results, no detectable concentrations of gasoline- or diesel-range petroleum were present in the samples. Based on the information provided above, the absence of the USTs and the analytical results, this facility is not expected to adversely impact the subject site.

Numerous hazardous materials (lead acid batteries, mineral oil, SF6 gas, and nitrogen) are also stored at this facility. This facility is not expected to adversely impact the subject site, however, should a significant release of hazardous materials from the facility impact the Site, the responsibility for investigation and remediation would be assigned to the designated responsible party.

5.0 SITE HISTORY

Historic aerial photographs, Building Department records, Local Street Directories, and Sanborn Fire Insurance maps were reviewed to establish a site history. A summary of the historical information review is presented in the following sections.

5.1 Aerial Photograph Review

The following is a summary of our review of available aerial photographs dated **1937, 1940, 1952, 1963, 1969, 1977, 1984, 1985, 1994, 2005, 2006, 2009, 2012, and 2016.** Selected historic aerial photographs can be found following this report.

1937, 1940, 1952, 1963, 1969, 1977, 1984, 1985, 1994, 2005, 2006, 2009, 2012, and 2016

Site: The Site consists of what appears to be agricultural land. What appears to be the existing rural residence and associated outbuildings are visible on the Rodriguez Parcel and Carlisle Central Parcel. A linear feature located on portions of the proposed gen-tie collector line corridors and extending off-site appears to be the existing Union Pacific railroad. By 1969, a feature visible on the eastern portion of the Burum Parcel appears to be the existing reservoir. By 1994, a structure visible on the central portion of the Trueblood West Parcel appears to be the existing pole barn. By 2006, a structure visible on the central portion of the Trueblood East Parcel appears to be the other existing pole barn.

Adjacent Property: Undeveloped and agricultural land and rural residences and associated outbuildings surround the Site. What appears to be the present-day SoCal Edison – Vestal

Substation is visible to the west of the GC Nut Parcel and Burum Parcel. By 1969, the present-day Sun Pacific Farming is visible in the vicinity of the Carlisle North Parcel.

5.2 Sanborn Fire Insurance Maps

Available Sanborn Fire Insurance Maps were reviewed at the Tulare County Library. Sanborn Fire Insurance Maps typically depict structures, their use, and possible fire hazards. Review of available historic Sanborn Fire Insurance Map indices revealed that the subject site was not located in the mapped areas.

5.3 County of Tulare Building Department

Records regarding current and historic permits issued for the Site addresses on file with the County of Tulare Building Department were requested. As of the date of this report, the County has not provided any records for the subject site addresses and thus constitutes a data gap. It is unknown if any records, if they exist, would contain any information that would constitute a REC.

5.4 Local Street Directories

Available historic Haines and Polk Criss-Cross Directories dated 1977 to 2018 were reviewed at the Visalia Branch Library in Visalia, California. Occupant listings recorded for the two Site addresses are listed below.

23160 Avenue 64, Ducor, California (Rodriguez Parcel)

Timeframe	Listing
1977 – 2018	n/a

3700 Highway 65, Ducor, California (Carlisle Central)

Timeframe	Listing
1988 – 2018	n/a
1985 – 1987	Jim Carlisle
1977 – 1984	n/a

5.5 Geologic Energy Management

The Geologic Energy Management Division's (CalGEM, formerly Division of Oil, Gas, and Geothermal Resources) depicts oil and gas wells, as well as plugged and abandoned dry holes in the central and southern portions of California. The maps were reviewed to determine if the Site or adjacent properties were occupied by oil and gas wells. Review of the CalGEM Online Mapping System revealed that there are two plugged/abandoned oil gas wells on the western portion of the Carlisle North Parcel. During the process of drilling, completing, and producing

these wells, there is a potential for soil and/or groundwater impact by wastes which are discharged to earthen sumps, leaking crude oil tanks, crude oil spillage during gathering operations, and leaking casing or pipelines.

There is also the potential for impact by the injection wells. Injection wells are used to increase oil recovery and to dispose of the salt and fresh water which is produced with oil and natural gas. These wells are classified by the U.S. Environmental Protection Agency into five classes according to the type of fluid they inject and where the fluid is injected. Injection wells associated with the Site are considered Class II wells. In California, all Class II injection wells are regulated by DOGGR. Class II injection wells fall under the Division's Underground Injection Control (UIC) program. The main features of the UIC program include permitting, inspection, enforcement, mechanical integrity testing, plugging and abandonment oversight, data management, and public outreach. According to the CalGEM database, documentation of a prospect well installation and an oil/gas well destruction/abandonment were listed for the two on-site wells. There are no records of any leaks or spills in regard to the on-site wells. Well records are attached in Appendix D.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

A site reconnaissance of the Site was conducted by Miguel Ceja (Technicon) on November 5, 2019 and January 21, 2020 and Jim Vue (Technicon) on November 6, 2019. The objective of the site reconnaissance was to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the Site. Methods used to observe the Site included walking the Site and visually and/or physically observing site features. Photographs were taken of site features and are presented in Appendix A. A Site Map (Figure 2) showing relevant features of the Site can be found following the text of this report.

6.2 General Site Setting

The subject site is comprised of all of 38 parcels and portions of three other parcels and encompasses approximately 3,647 acres of agricultural and grazing land clustered around Ducor in Tulare County, California. Rural residences and associated barns, shops, pole barns, and other outbuildings occupy some of the parcels. Pole- and pad-mounted transformers, irrigation wells, a temporary abandoned irrigation well, an unlined reservoir, and aboveground storage tanks are also located on the Site. The parcels are connected by approximately 12.5 miles of proposed gen-tie collector line corridors.

6.3 Site Reconnaissance Observations

A site reconnaissance was conducted in an effort to determine if the current uses of the Site were likely to involve the use, treatment, storage, disposal or generation of hazardous substances or petroleum products. Additionally, indications of past uses of the Site that were observed or identified in interviews or a records review are also identified.

6.3.1 Storage Tanks

6.3.1.1 Underground Storage Tanks (USTs)

An underground storage tank (UST) is any tank, including underground piping connected to the tank, that is or has been used to store hazardous substances or petroleum products and the volume of which is 10% or more beneath the ground surface.

- ***No** indications of existing or former USTs were observed at the Site.*

6.3.1.2 Above-ground Storage Tanks (ASTs)

An above-ground storage tank (AST) for the purposes of this report, is any tank that has a capacity to store more than 55 gallons of a hazardous substance or petroleum product and is substantially or totally above the ground surface. Does not include pressure tanks associated with a domestic well.

- *One approximate 2,500-gallon fertilizer AST and one approximate 2,000-gallon sulfuric acid AST associated with an irrigation well were observed on the western portion of the Bennett Parcel. Four propane tanks associated with two wind machines were also observed on the western portion of the Bennett Parcel.*

6.3.2 Drums

A drum is a container (typically, but not necessarily, holding 55 gallons of liquid that may be used to store hazardous substances, petroleum products, or unidentified substances. For the purposes of this report hazardous substances or petroleum product containers greater than 5 gallons and 275-gallon totes are considered drums.

- *One approximate 10-gallon hydraulic fluid drum was observed next to each of the two on-site irrigation wells. Minor oil-staining was observed beneath the 10-gallon drum located on the Bennett Parcel.*

6.3.3 Hazardous Substances and Petroleum Products Containers

Hazardous substances or petroleum products containers for liquids are generally less than 5 gallons and may be made of metal, glass or plastic. Containers may also contain solids and gasses and may be made of paper, plastic, cardboard or metal.

- *Two wind machines powered by propane and wind machine motors were observed on the western portion of the Bennett Parcel. No oil stains were observed in the vicinity of the wind machines or wind machine motors.*

6.3.4 Hazardous Substances and Petroleum Products in Equipment

Hazardous substances or petroleum products can be contained in equipment such as elevator and hoist pistons, machinery, forklifts and other equipment.

- *Two wind machines powered by propane and wind machine motors were observed on the western portion of the Bennett Parcel. No oil stains were observed in the vicinity of the wind machines or wind machine motors.*

6.3.5 Stained or Corroded Soil, Pavements or Floors

Observations of stained soil or pavement or staining or corrosion on floors, walls or ceilings are to be identified; this does not include staining from water.

- *Minor oil-staining was observed beneath the 10-gallon drum located on the western portion of the Bennett Parcel. However, no stained or corroded pavements or floors were observed at the Site.*

6.3.6 Stressed Vegetation

Areas of stressed vegetation, other than from insufficient watering, are to be identified.

- ***No** stressed vegetation was observed at the Site.*

6.3.7 Odors

Strong, pungent, or noxious odors evident of hazardous substances or petroleum products are to be identified.

- ***No** strong odors were noted at the Site.*

6.3.8 Drains and Sumps

Drains and sumps can include floor drains, floor sinks, sumps and oil-water separators. These drains or sumps may drain to on-site septic systems, dry wells, or seepage pits. Drains or sumps may also discharge to an off-site municipal sanitary sewer system.

- ***No** drains or sumps were observed at the Site.*

6.3.9 Pits, Ponds or Lagoons

Pits, ponds and lagoons are man-made or natural depressions in the ground surface that that may hold liquids or sludge containing hazardous substances or petroleum products.

- *One on-site unlined reservoir holding water was observed on the Burum Parcel.*

6.3.10 Pools of Liquid

Pools of liquids include standing surface water, liquid spills, and liquids contained in sumps.

- *With the exception of the Burum Parcel reservoir, no pools of liquid were observed at the Site.*

6.3.11 Solid Waste

For the purposes of this report, solid waste includes areas that are apparently filled or graded by non-natural causes (or filled by fill of unknown origin) suggesting construction debris, demolition debris, or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal.

- ***No** areas of solid waste were observed at the Site.*

6.3.12 Waste Water

For the purposes of this report, waste water includes water or other liquids (including storm water) or any discharge into a drain or ditch, underground injection system, stream or pond on or adjacent to the Site.

- ***No** evidence of waste water was observed at the Site.*

6.3.13 Septic Systems

A septic system is generally an on-site sewage treatment and disposal system which can include a septic tank and disposal field consisting of leach lines, seepage pits or cesspools.

- ***No** septic systems were observed at the Site. As of the date of this report, Technicon has not conducted a site reconnaissance for the areas immediately surrounding the two on-site residences. Presumably there is a septic system at each of the residences.*

6.3.14 PCBs

Polychlorinated biphenyl's (PCBs) were once widely used in dielectric and coolant oils in transformers and capacitors. PCB production was banned in the US in 1979 but some older transformers and electrical equipment may still contain PCBs. Many fluorescent light ballasts manufactured before 1979 also contained small quantities of PCBs. An inventory and inspection of fluorescent light ballasts was not conducted as part of this investigation.

- ***Seven** pole- and/or pad-mounted transformers were observed throughout the Site.*

6.3.15 Asbestos-Containing Building Materials

Asbestos is a fibrous material and has been used in many different applications for its fireproofing abilities and resistance to many chemicals. Common uses of asbestos included thermal and acoustical insulation, fireproofing, textiles, concrete, plastic products such as vinyl floor tiles, roofing felts, and paper and electrical insulation.

- *The residence and associated outbuildings on the Rodriguez Parcel and the Carlisle Central Parcel were constructed prior to the 1978 ban on the manufacture of friable asbestos containing material, and before the 1980 PACM date established by the July 10, 1995 Federal regulations. An asbestos survey was not conducted as part of this investigation.*

6.3.16 Heating/Cooling

Fuel sources for heating and cooling systems can include heating oil, natural gas, propane and electric.

- *The cooling systems for the residences on the Rodriguez Parcel and Carlisle Central are reportedly powered by electricity, provide by SoCal Edison whereas heating is propane-powered.*

6.3.17 Wells

Observations of all wells, including water supply (drinking and irrigation), abandoned wells, dry wells, oil wells, injection wells, etc. are to be noted.

- *Three irrigation wells were observed at the Site. One of the irrigation wells appears to be non-operational (Figure 2). Technicon recommends that the non-operational irrigation well should be properly abandoned under state and local regulations.*

  Two plugged/abandoned oil gas wells identified on the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website are located on the Carlisle North Parcel (Figure 3). No obvious evidence of either wells were observed during the site reconnaissance.

6.3.18 Easements

Easements or right-of-ways that cross or provide access to the Site are to be noted.

- *The proposed gen-tie collector line corridors crosses and follows the Union Pacific railroad easement. Railroad companies have reportedly used pesticides and herbicides in concentrations higher than those that are general used in agricultural applications. It is possible that herbicides containing arsenic or other environmentally persistent products may have been used to control weed growth along the railroad easement.*

  Mr. Venai Shenoy stated that the proposed gen-tie collector line corridors are "engineered to completely avoid disturbance within the Union Pacific railroad right-of-way and has no legal right to ground disturbance within the Union Pacific railroad easement." It is not anticipated that the Site would be adversely impacted by the Union Pacific railroad easement.

6.4 Adjoining Properties

Adjoining properties are those which are contiguous or partially contiguous with the Site borders. Properties which are separated from the Site by streets, roads or other public thorough fares are considered adjoining. To the extent that the adjoining properties are visually or physically observable from the Site or publicly accessible areas, observations of the adjoining properties for

the purposes of identifying possible recognized environmental conditions that could impact the Site are presented below.

- *With the exception of the SoCal Edison – Vestal Substation and Sun Pacific Farming which were discussed in Section 4.2.1, no obvious evidence of handling, storage, or disposal of significant quantities of hazardous substances or petroleum products or recognized environmental conditions were observed on any adjoining properties.*

7.0 INTERVIEWS

7.1 Property Owners & Occupants

An interview was conducted with Mr. William Bennett, the owner of the Bennett Parcel. He stated that he has owned the parcel for "many years" and is unaware of any USTs, ASTs, pesticide mixing facilities, agricultural-chemical storages, hazardous material spills, or buried trash on the parcel. Mr. Bennett also stated that the parcel is used for dry farm.

An interview was conducted with the son (Mr. Jim Zimmerman) of Linda Zimmerman, the owner of the Zimmerman East Parcel and Zimmerman West Parcel. Mr. Zimmerman stated that the Zimmerman family owned the parcels for approximately 80 years and is unaware of any USTs, ASTs, pesticide mixing facilities, agricultural-chemical storages, hazardous material spills, or buried trash on the parcel. Mr. Zimmerman also stated that the parcels are used to farm wheat and barley.

An interview was conducted with Mr. Julien Barber, the representative of the GC Nut Parcel. He stated GC Nut LLC purchased this parcel in 2006 and is unaware of any USTs, ASTs, pesticide mixing facilities, agricultural-chemical storages, hazardous material spills, or buried trash on the parcel.

An interview was conducted with Mr. Donald Hardaway, the owner of the Hardaway North Parcel and Hardaway South Parcel. He stated that his family has owned the parcels since the 1930s and is unaware of any USTs, ASTs, pesticide mixing facilities, agricultural-chemical storages, hazardous material spills, or buried trash on the parcels. Mr. Hardaway also stated that there has never been any developments on the parcels, and that the parcels were used for dry farming.

An interview was conducted with Mr. Jeff Burum, the owner of the Burum Parcel. He stated that his family has owned the parcel for approximately 60 years and is unaware of any USTs, ASTs, pesticide mixing facilities, agricultural-chemical storages, hazardous material spills, or buried trash on the parcel. Mr. Burum also stated that the parcel are used for dry farming.

An interview was conducted with Mr. Venai Shenoy in regards to the proposed gen-tie collector line corridors crossing the Union Pacific railroad. He stated the "Project proponent confirms that Project is engineered to completely avoid disturbance within the Union Pacific right-of-way; moreover Project has no legal right to ground disturbance within the Union Pacific rail right-of-way."

Attempts to conduct an interview with Mr. Juan Avalos (owner of Avalos Parcel), Mr. Michael Carlisle (representative of Carlisle North, Central, and South Parcels), Ms. Marguerite Proctor (owner of Proctor Parcel), and Mr. Chris Trueblood (representative of Trueblood East and West Parcels) were not successful. As of the date of this report, these owners/representatives have not contacted Technicon for an interview.

7.2 Local Government Officials

Interviews with local government officials were discussed previously in Sections 4.1 and 4.2.

8.0 FINDINGS, CONCLUSIONS, & OPINIONS

We have performed a Phase I Environmental Site Assessment of the subject site in conformance with the scope and limitations of ASTM Practice E-1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) or records of environmental liens in connection with the property. Although not considered RECs, Technicon does recommend the following:

- Three irrigation wells are located on the northern half of the Site. One of the irrigation well was reported as non-operational (Figure 2). Technicon recommends that the non-operational irrigation well be either temporarily abandoned or destroyed in accordance with state and local regulations.

- Two oil/gas wells identified on the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) are located on the Carlisle North Parcel. During the process of drilling, completing and producing the on-site oil/gas wells, there is a potential for soil and/or groundwater impact by wastes which are discharged to earthen sumps, leaking crude oil tanks, crude oil spillage during gathering operations, and leaking casing or pipelines. It is unknown if the soils at the Site were impacted by the oil field operations.

- The residences and associated outbuildings on the Site were constructed before the 1978 ban on the manufacture of friable asbestos containing materials. Therefore, asbestos-containing construction materials may be present in the building materials used for their construction. An asbestos survey was not conducted as part of this investigation, but it is recommended prior to any demolition or modification of this structure.

The following are data gaps encountered during this assessment:

- As of the date of this report, interviews with some of the property owners in regards to the site history has not been completed. Due to this, Technicon was not able to fully inspect the on-site residences and associated outbuildings.

9.0 LIST OF SOURCES

Aerial Photographs: 1937, 1952, 1969, 1977, 1984, 1994, 2005, 2009, 2012, and 2016 EDR.

ASTM Designation: E 1527-13, Standard Practices for Environmental Site Assessments: Phase I Environmental Site Assessment Process: American Society for Testing and Materials, November 2013.

California Department of Water Resources www.water.ca.gov/waterdatalibrary

EDR Area / Corridor Report October 3, 2019: Environmental Data Resources, Inc., Milford, Connecticut.

EDR Aerial Photo Decade Package January 15, 2020: Environmental Data Resources, Inc., Milford, Connecticut.

EDR Radius Map Report January 13, 2020: Environmental Data Resources, Inc., Milford, Connecticut.

EDR Sanborn Map Report January 13, 2020: Environmental Data Resources, Inc., Milford, Connecticut.

Geologic Energy Management Division's; CalGEM Online Mapping System, https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx, records review, February 4, 2020.

United States Geological Survey, 7.5-minute series topographic quadrangles, Richgrove, California, date 1952, photo-revised 1973.

United States Geological Survey, 7.5-minute series topographic quadrangles, Ducor, California, date 1952, photo-revised 1969.

United States Geological Survey, 7.5-minute series topographic quadrangles, Fountain Springs, California, date 1965.

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

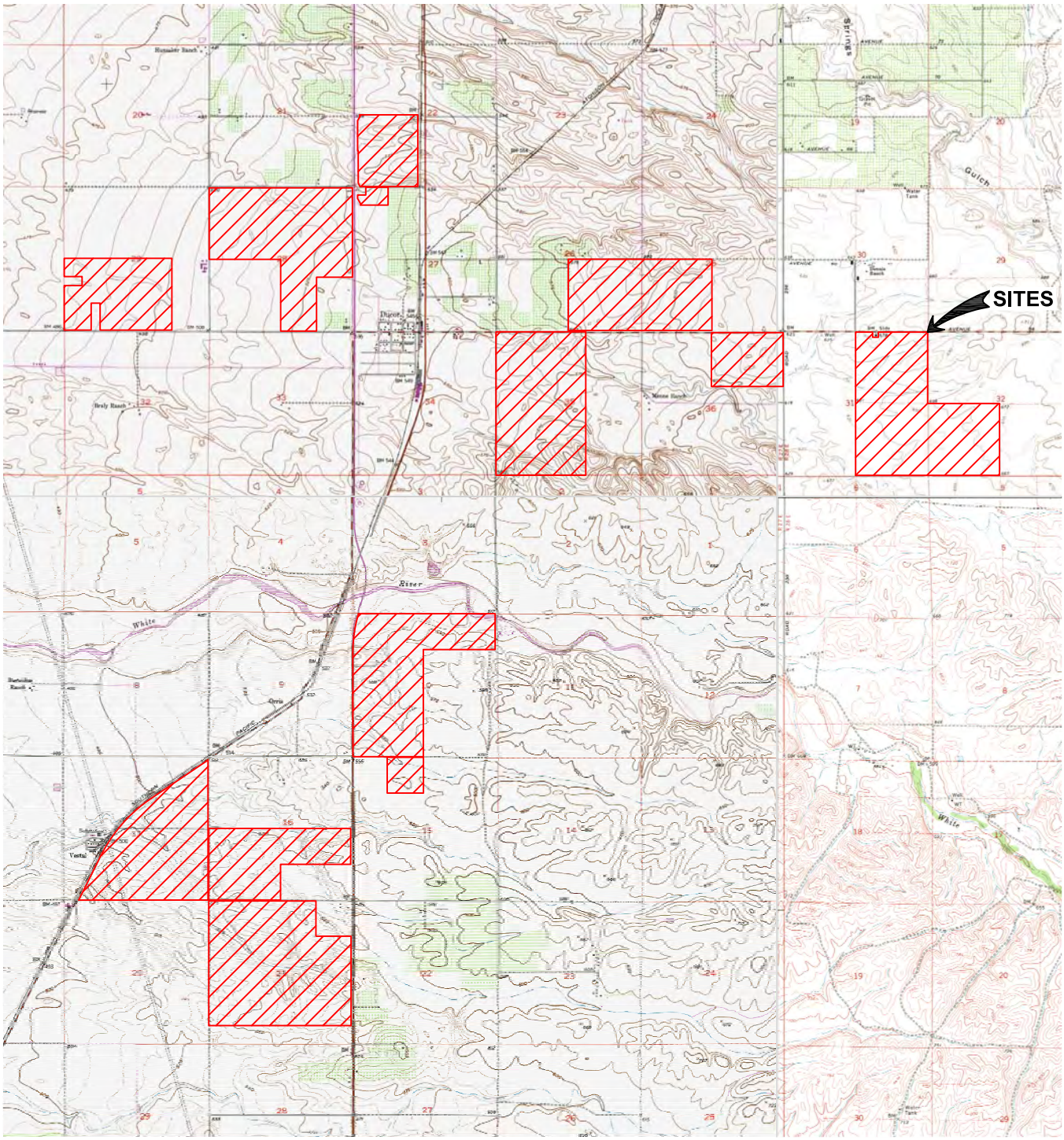
We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in §312.10 of 40 CFR312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Jim Vue, GIT
Staff Geologist
Mr. Vue possesses a Bachelor of Science in Geology from the California State University Fresno and has experience in geologic mapping, sedimentological characterization, aerial photograph interpretation, as well as the collection and interpretation of ground penetrating radar (GPR) data. He also possesses the 40-Hour OSHA HAZWOPER Training in accordance with Title 29 Code of Federal Regulations 1910.120.

Steve Curra, PG
Environmental Department Manager
Mr. Steven Curra has over 30 years of experience in environmental engineering, with extensive experience in Phase I and II investigations. Mr. Curra is a Professional Geologist and has served as project manager for a variety of characterizations and remedial activities, including underground storage tank site investigations, landfill post-closure development, waste disposal and treatment facilities and hazardous waste management.

Mr. Curra has a thorough knowledge of the environmental engineering industry, and he has developed the ability to effectively coordinate the activities of civil engineers, geologists, subcontractors, and technicians to ensure the investigation is thorough and cost-effective. He has an excellent working knowledge of the codes governing the environmental issues facing our clients today and strong agency relationships with a variety of local, state and federal agencies. Mr. Curra possesses a B.S. in Geology from California State University, Fresno. He also possesses the 40-Hour OSHA HAZWOPER Training in accordance with Title 29 Code of Federal Regulations 1910.120.

FIGURES



USGS MAP: RICHGROVE, DATE: 1952, PHOTO REV.: 1973,
USGS MAP: DUCOR, DATE: 1952, PHOTO REV.: 1969,
USGS MAP: FOUNTAIN SPRINGS, DATE: 1965

NORTH

TECHNICON ENGINEERING SERVICES, INC.	PROJECT: 190662.002 SOURCE: USGS TOPOGRAPHIC MAPS	VICINITY MAP REXFORD SOLAR FARM ADD-ON TRUEBLOOD PARCELS STATE ROUTE 65 AND AVENUE 56 TULARE COUNTY, CALIFORNIA	FIGURE 1 NTS

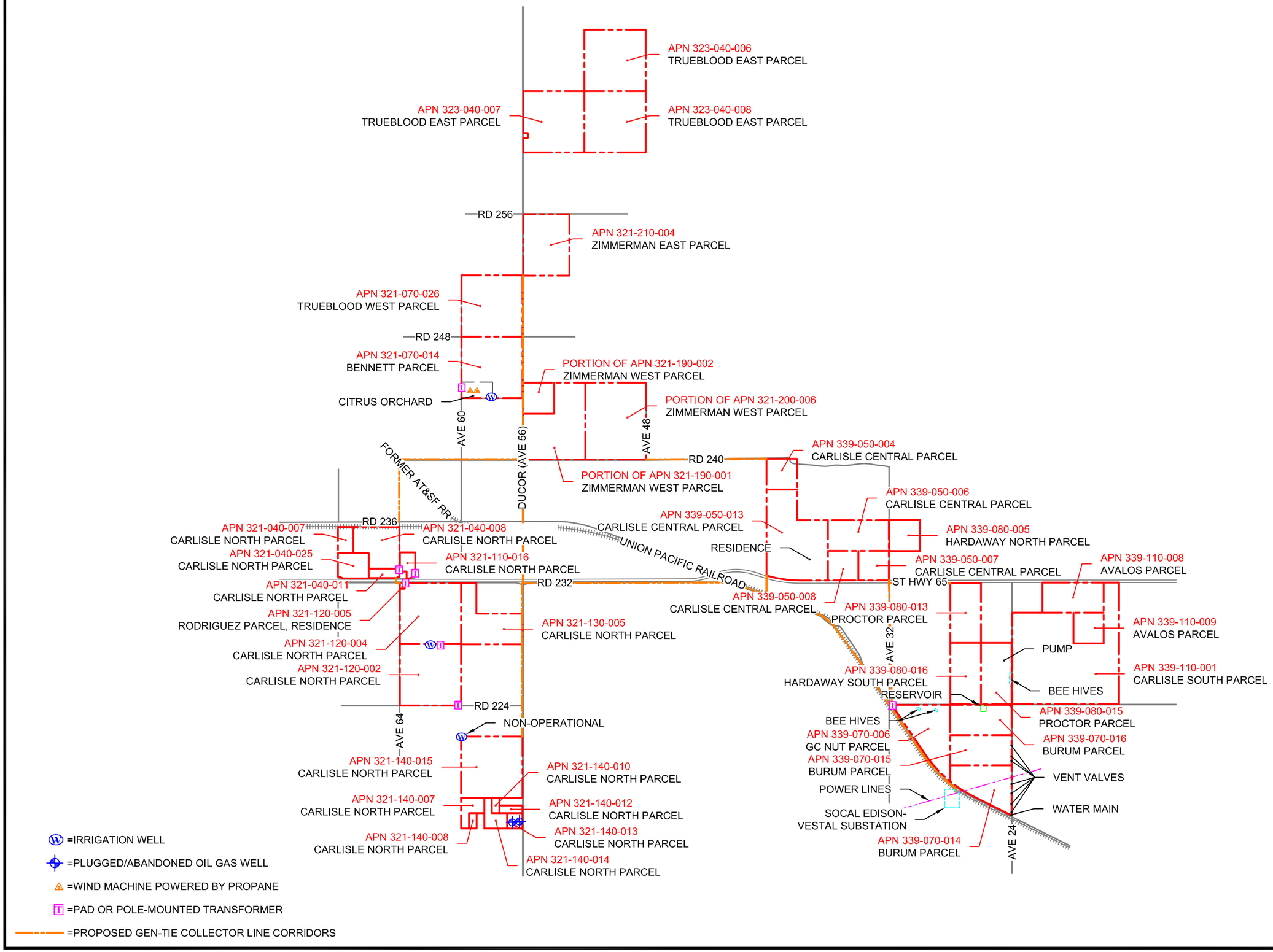


FIGURE 2

SITE MAP
REXFORD SOLAR FARM
ADD-ON TRUEBLOOD PARCELS
STATE ROUTE 65 AND AVENUE 56
TULARE COUNTY, CALIFORNIA

DATE: 1/27/20

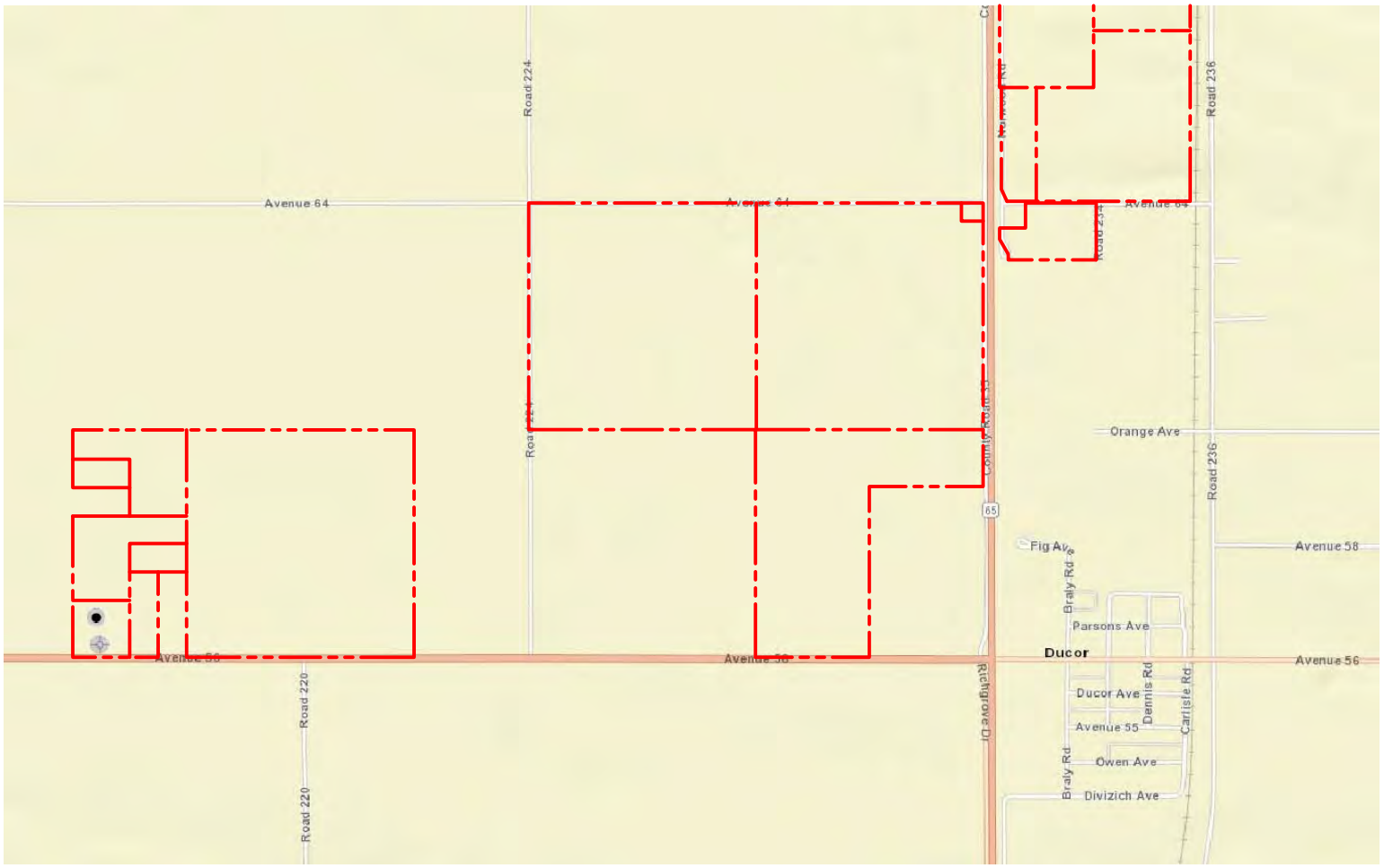
APPROVED BY: JV

PROJECT: 190662.002

CAD BY: MH

TECHNICON
ENGINEERING SERVICES, INC.

*STATE OF CALIFORNIA - DEPARTMENT OF CONSERVATION



NORTH

SCALE: 1"=2000'

0' 1000' 2000'

=PLUGGED/ABANDONED OIL GAS WELL

TECHNICON ENGINEERING SERVICES, INC.	PROJECT: 190662	DATE: 12/10/19	SITE DETAIL REXFORD SOLAR FARM STATE ROUTE 65 AND AVENUE 56 TULARE COUNTY, CALIFORNIA
	SOURCE: DOGGR	APPROVED BY: JV	FIGURE 3

APPENDIX A

SITE PHOTOGRAPHS

Photo 1

Southwest-facing view of a barn and two silos located on the Carlisle North Parcel (observed in November 2019).

Photo 2

West-facing view of the Rodriguez residence located on the Rodriguez Parcel (observed in November 2019).

Photo 3

West-facing view of a temporary abandoned irrigation well located on the Carlisle North Parcel (observed in November 2019).

Photo 4

South-facing view of two wind machines and four propane tank located on the citrus orchard located in the northern portion of the Bennett Parcel (observed in November 2019).

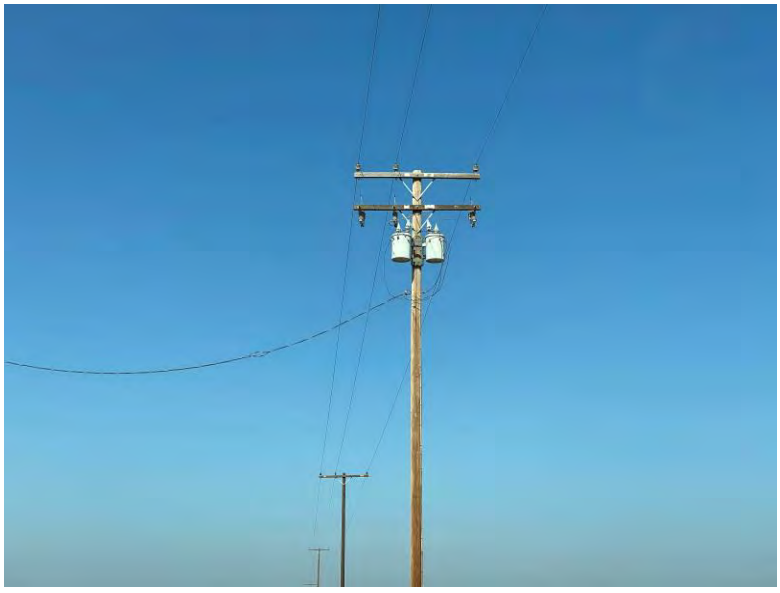


Photo 5

One of the seven pole-mounted transformers located throughout the Site (observed in November 2019).

Photo 6

An irrigation well, a 10-gallon hydraulic fluid, filter pumps, an approximate 2,500-gallon fertilizer tank, and an approximate 2,000-gallon sulfuric acid tank located on the Bennett Parcel (observed in November 2019).

Photo 7

Two tractor attachments underneath a pole-barn located on the Trueblood Parcel (observed in November 2019).

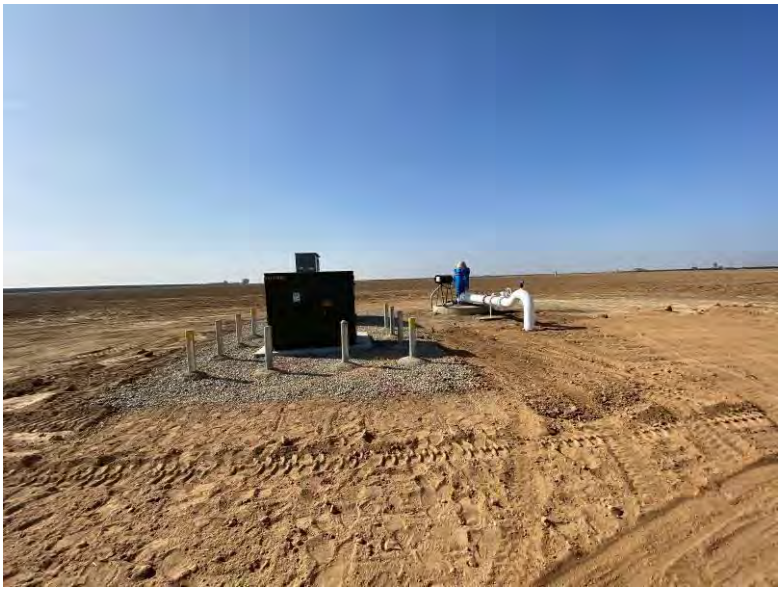


Photo 8

An irrigation well, a 10-gallon hydraulic fluid aboveground storage tank, and a pad-mounted transformer located on the Carlisle North Parcel (observed in November 2019).

Photo 9

Bee hives located on the GC Nut Parcel (observed in November 2019).

Photo 10

West-facing view of a reservoir holding water for irrigation (observed in November 2019).

Photo 11

East-facing view of a residence and associated outbuildings located on the Carlisle Central Parcel (observed in November 2019).

Photo 12

A water main line located on the southern boundary of the Burum Parcel (observed in November 2019).

Photo 13

A pole barn located on the Trueblood East Parcel (observed in January 2020).

Photo 14

Northeast-facing view of the Trueblood East Parcel (observed in January 2020).

Photo 15

West-facing view of the northern portion of the Trueblood East Parcel and Avenue 56 (observed in January 2020).

APPENDIX B

DATABASE SEARCH INFORMATION

Rexford
State Route 65
California Hot Sprin, CA 93207

Inquiry Number: 5815145.2s
October 03, 2019

EDR Area / Corridor Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

SUBJECT PROPERTY INFORMATION

ADDRESS

STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

TARGET PROPERTY SEARCH RESULTS

The Target Property was identified in the following databases.

Page Numbers and Map Identifcations refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

CHMIRS: California Hazardous Material Incident Report System

A review of the CHMIRS list, as provided by EDR, and dated 05/15/2019 has revealed that there is 1 CHMIRS site within the requested target property.

Site	Address	Map ID / Focus Map(s)	Page
Not reported OES Incident Number: 000891 Date Completed: 20-MAR-90	AVE 80 / RD 272	1 / 10	58

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Page Numbers and Map Identifcations refer to the EDR Area/Corridor Report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State and tribal leaking storage tank lists

LUST: Geotracker's Leaking Underground Fuel Tank Report

A review of the LUST list, as provided by EDR, has revealed that there are 5 LUST sites within approximately 0.5 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
SPALDING RANCH / S&J	***AVE 56 & RD 256***	***N 0 - 1/8 (0.002 mi.)***	***3 / 10***	***60***
Database: LUST REG 5, Date of Government Version: 07/01/2008 Status: Case Closed				
SPALDING RANCH / S&J	AVE 56 & RD 256	N 1/8 - 1/4 (0.216 mi.)	A9 / 6	68
Database: LUST, Date of Government Version: 06/10/2019 Status: Completed - Case Closed Global Id: T0610700395				
VISTA VERDE RANCH	AVENUE 2 EAST OF HWY	N 1/8 - 1/4 (0.216 mi.)	A10 / 6	69
Database: LUST, Date of Government Version: 06/10/2019 Status: Completed - Case Closed Global Id: T0610700378				
DUCOR ELEMENTARY	***23761 AVE 56***	***W 1/4 - 1/2 (0.414 mi.)***	***11 / 8***	***70***
Database: LUST REG 5, Date of Government Version: 07/01/2008 Database: LUST, Date of Government Version: 06/10/2019 Status: Completed - Case Closed Status: Case Closed Global Id: T0610700031				
DUCOR HANDY MARKET	***23314 AVE 56***	***SSE 1/4 - 1/2 (0.436 mi.)***	***12 / 8***	***72***
Database: LUST REG 5, Date of Government Version: 07/01/2008 Database: LUST, Date of Government Version: 06/10/2019 Status: Completed - Case Closed Status: Pollution Characterization Global Id: T0610760936				

CPS-SLIC: Statewide SLIC Cases

A review of the CPS-SLIC list, as provided by EDR, has revealed that there is 1 CPS-SLIC site within approximately 0.5 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
M. HURE & SON COLD S	***RICHGROVE DRIVE & AV***	***0 - 1/8 (0.001 mi.)***	***2 / 20***	***59***
Database: CPS-SLIC, Date of Government Version: 06/10/2019 Facility Status: Completed - Case Closed Global Id: SL0610790722				

State and tribal registered storage tank lists

AST: Aboveground Petroleum Storage Tank Facilities

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
CED DUCOR SOLAR 1 Database: AST, Date of Government Version: 07/06/2016	22389 AVENUE 32	NW 0 - 1/8 (0.029 mi.)	5 / 17	62

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: CERS HAZ WASTE

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 08/14/2019 has revealed that there is 1 CERS HAZ WASTE site within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
SUN PACIFIC FARMING	***5861 RD 224***	***SSW 0 - 1/8 (0.035 mi.)***	***6 / 7***	***62***

Local Lists of Registered Storage Tanks

HIST UST: Hazardous Substance Storage Container Database

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 HIST UST sites within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
RAYMOND S CAMBALIK Facility Id: 00000044017	248 ROAD AND 60 AVE	N 0 - 1/8 (0.022 mi.)	4 / 9	61
HARRISON Facility Id: 00000041787	22426 AVE 68	W 0 - 1/8 (0.102 mi.)	7 / 3	67

CERS TANKS: California Environmental Reporting System (CERS) Tanks

A review of the CERS TANKS list, as provided by EDR, and dated 08/14/2019 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
SUN PACIFIC FARMING	***5861 RD 224***	***SSW 0 - 1/8 (0.035 mi.)***	***6 / 7***	***62***

Other Ascertainable Records

CUPA Listings: CUPA Resources List

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 2 CUPA Listings sites within approximately 0.25 miles of the requested target property.

Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
SUN PACIFIC FARMING	***5861 RD 224***	***SSW 0 - 1/8 (0.035 mi.)***	***6 / 7***	***62***
Database: CUPA TULARE, Date of Government Version: 05/09/2019				
SCE - VESTAL SUBSTAT	RICHGROVE DR	WNW 1/8 - 1/4 (0.159 mi.)	8 / 20	67
Database: CUPA TULARE, Date of Government Version: 05/09/2019				

HIST CORTESE: Hazardous Waste & Substance Site List

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 2 HIST CORTESE sites within approximately 0.5 miles of the requested target property.

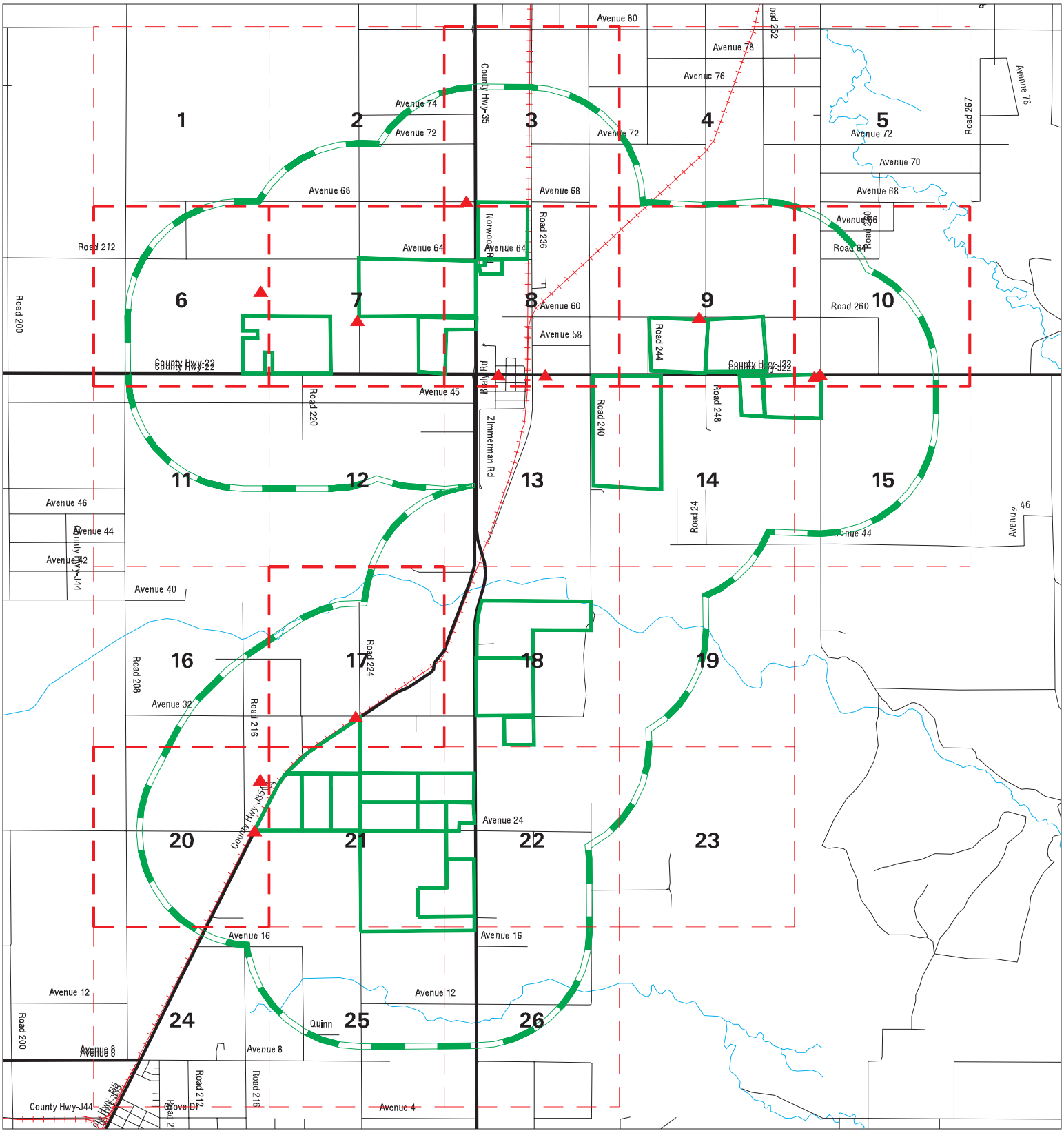
Site	Address	Direction / Distance	Map ID / Focus Map(s)	Page
SPALDING RANCH / S&J	***AVE 56 & RD 256***	***N 0 - 1/8 (0.002 mi.)***	***3 / 10***	***60***
Reg Id: 5T54000421				
DUCOR ELEMENTARY	***23761 AVE 56***	***W 1/4 - 1/2 (0.414 mi.)***	***11 / 8***	***70***
Reg Id: 5T54000030				

MAPPED SITES SUMMARY

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 10		AVE 80 / RD 272	CHMIRS	TP
2 / 20	M. HURE & SON COLD S	RICHGROVE DRIVE & AV	CPS-SLIC, CERS	5 0.001
3 / 10	SPALDING RANCH / S&J	AVE 56 & RD 256	LUST, HIST CORTESE, CERS	13 0.002 North
4 / 9	RAYMOND S CAMBALIK	248 ROAD AND 60 AVE	HIST UST	117 0.022 North
5 / 17	CED DUCOR SOLAR 1	22389 AVENUE 32	AST	155 0.029 NW
6 / 7	SUN PACIFIC FARMING	5861 RD 224	CERS HAZ WASTE, CERS TANKS, CUPA Listing...	184 0.035 SSW
7 / 3	HARRISON	22426 AVE 68	HIST UST	540 0.102 West
8 / 20	SCE - VESTAL SUBSTAT	RICHGROVE DR	CUPA Listings	837 0.159 WNW
A9 / 6	SPALDING RANCH / S&J	AVE 56 & RD 256	LUST	1142 0.216 North
A10 / 6	VISTA VERDE RANCH	AVENUE 2 EAST OF HWY	LUST	1142 0.216 North
11 / 8	DUCOR ELEMENTARY	23761 AVE 56	LUST, HIST CORTESE, CERS	2186 0.414 West
12 / 8	DUCOR HANDY MARKET	23314 AVE 56	LUST, UST, EMI	2301 0.436 SSE

Key Map - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1 2 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19 10:01 PM

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	2	2	NR	NR	5

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		1	0	0	NR	NR	1
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		1	0	NR	NR	NR	1
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		2	0	NR	NR	NR	2
CERS TANKS	0.250		1	0	NR	NR	NR	1
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP	1	NR	NR	NR	NR	NR	1
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		1	1	NR	NR	NR	2

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	1	NR	NR	2
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		1	9	3	3	0	0	16

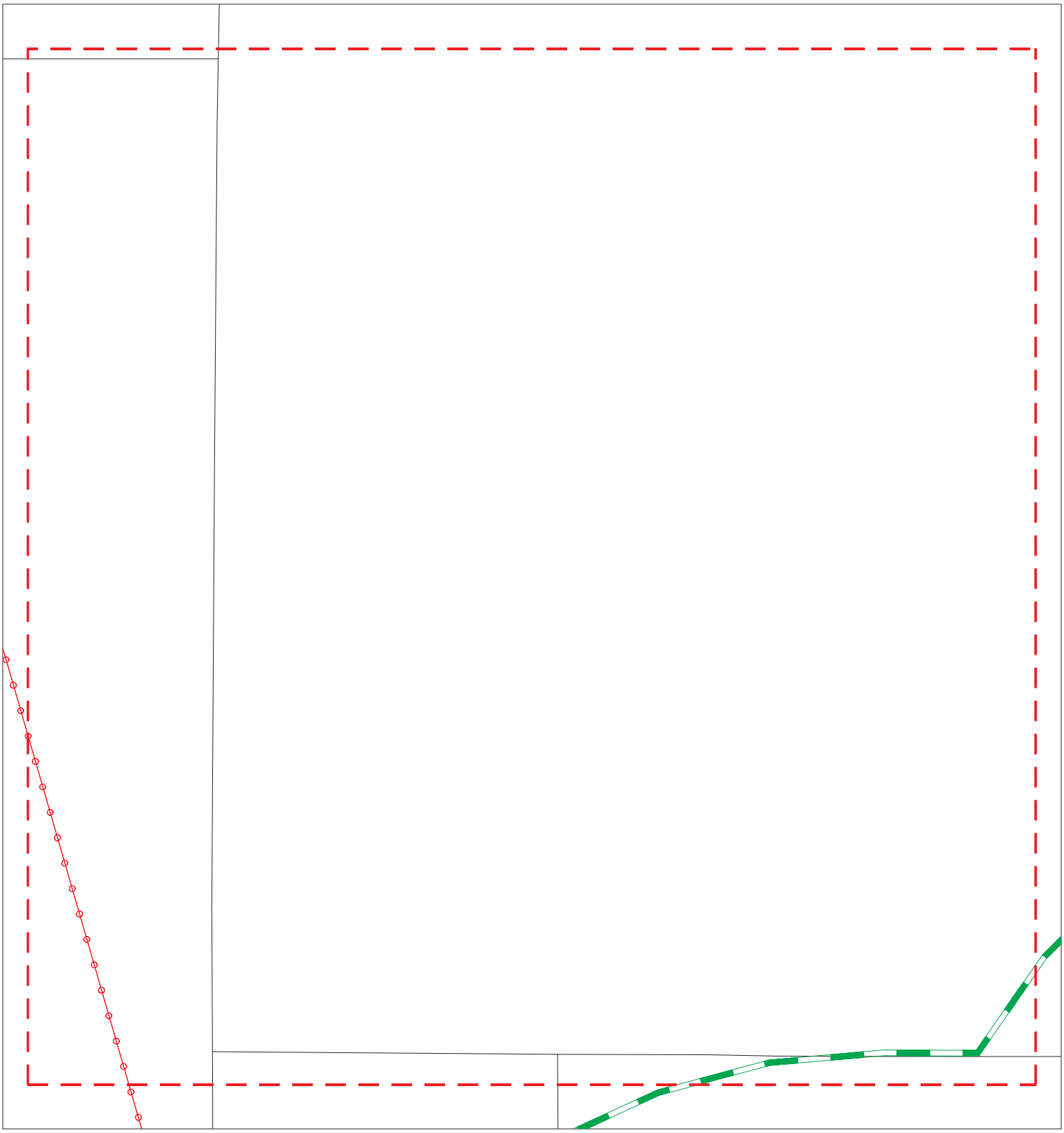
NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Focus Map - 1 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

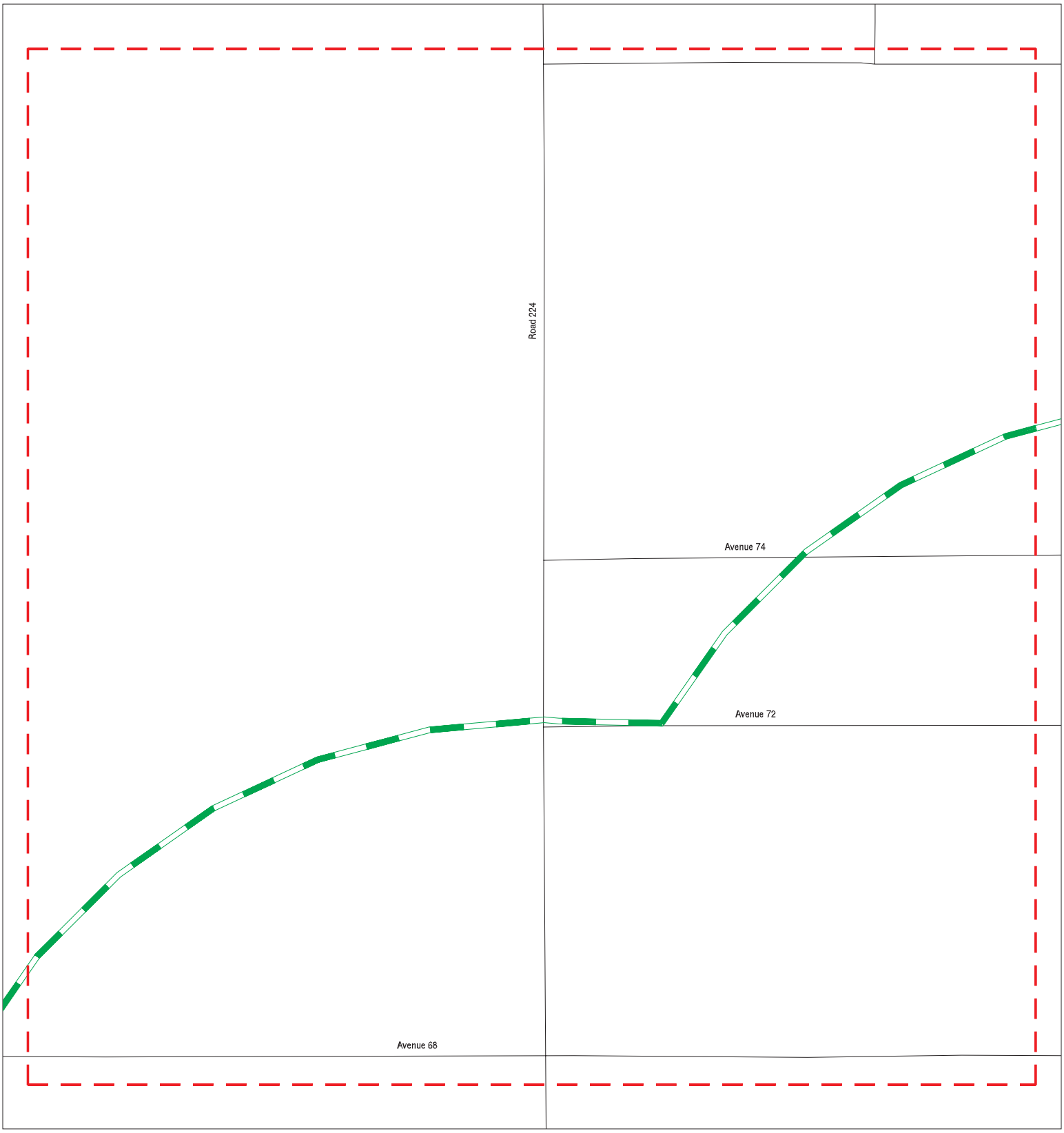
MAPPED SITES SUMMARY - FOCUS MAP 1

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 2 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

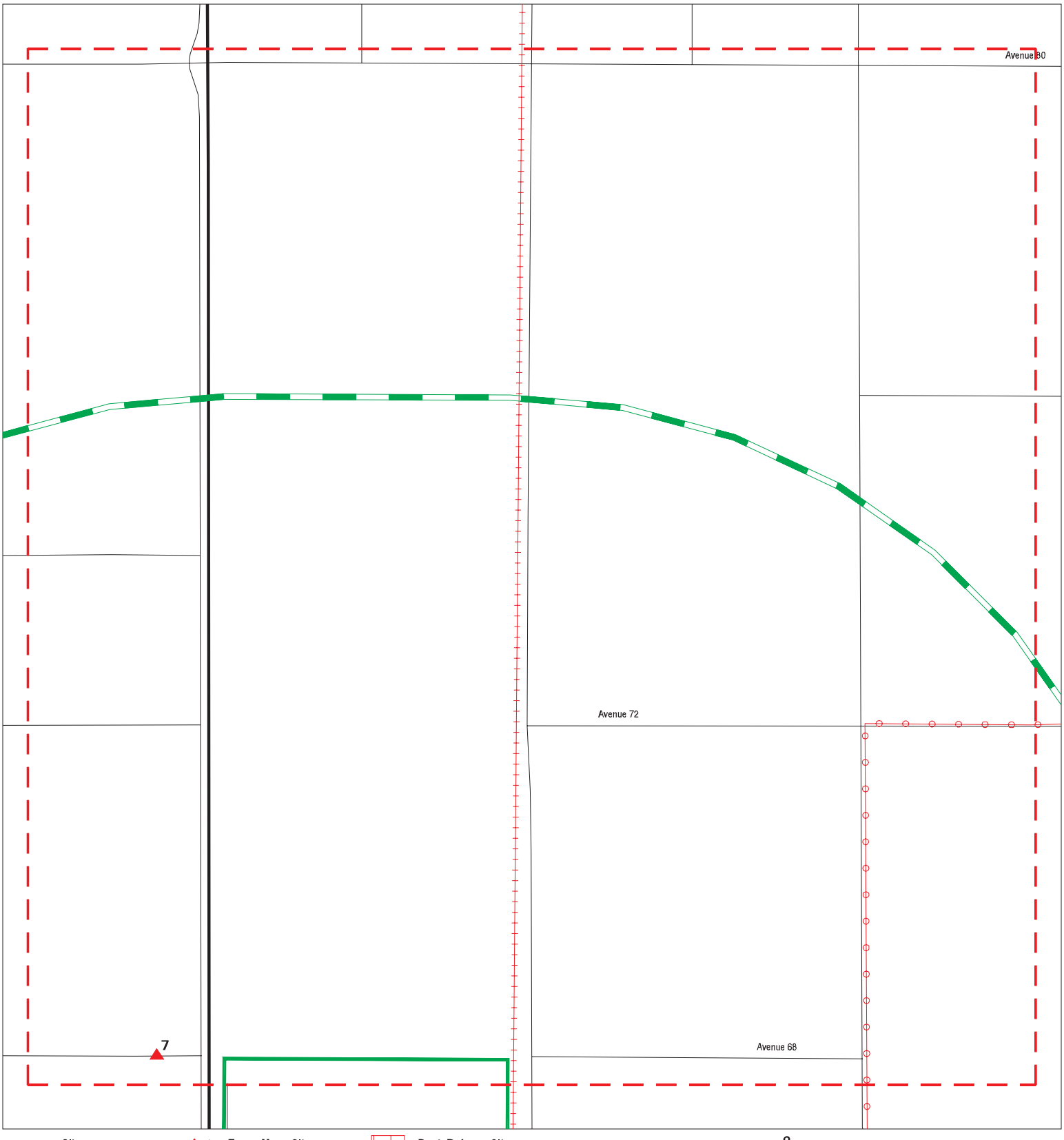
MAPPED SITES SUMMARY - FOCUS MAP 2

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 3 - 5815145.2s



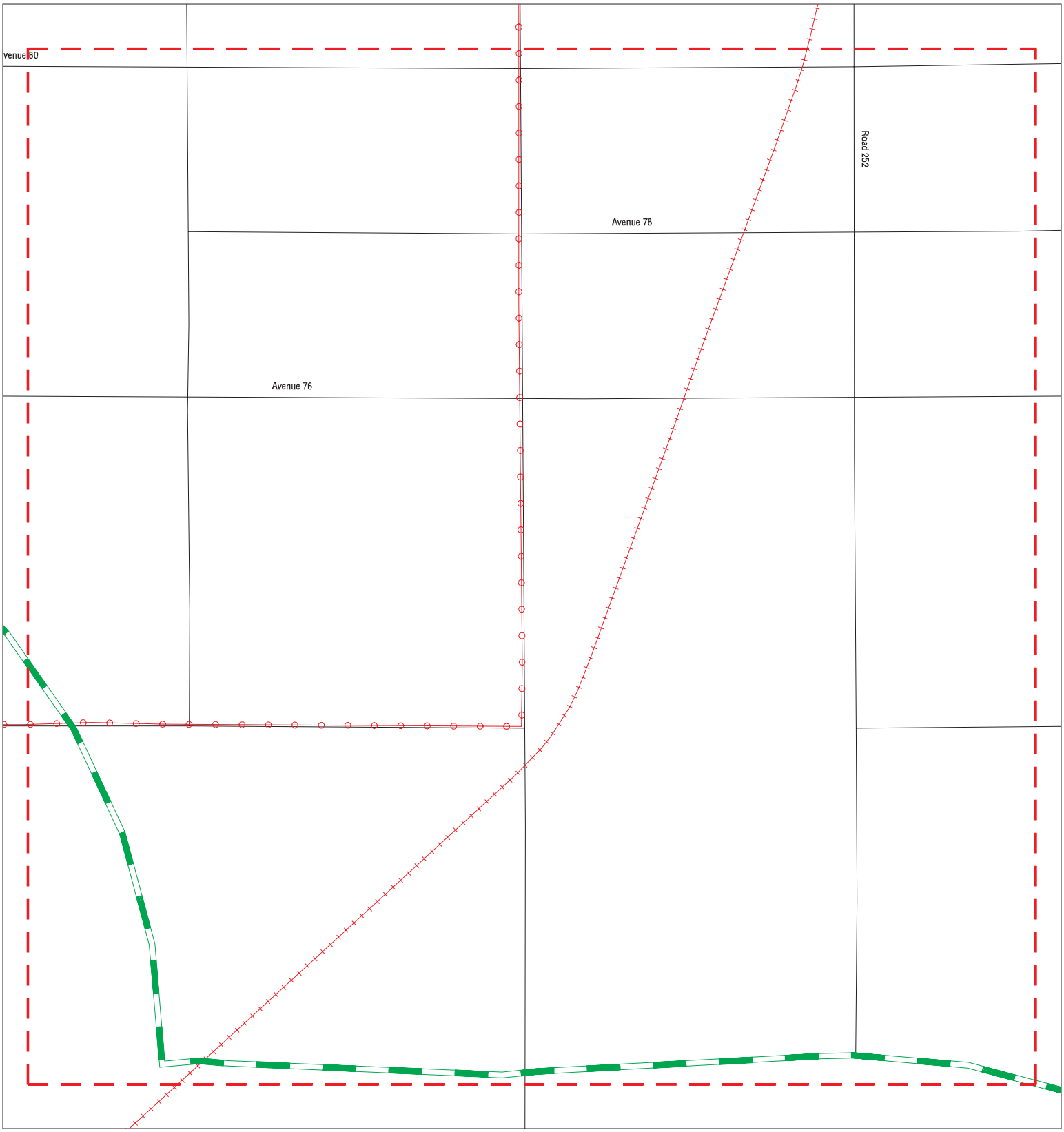
SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 3

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
7 / 3	HARRISON	22426 AVE 68	HIST UST	540 0.102 West

Focus Map - 4 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

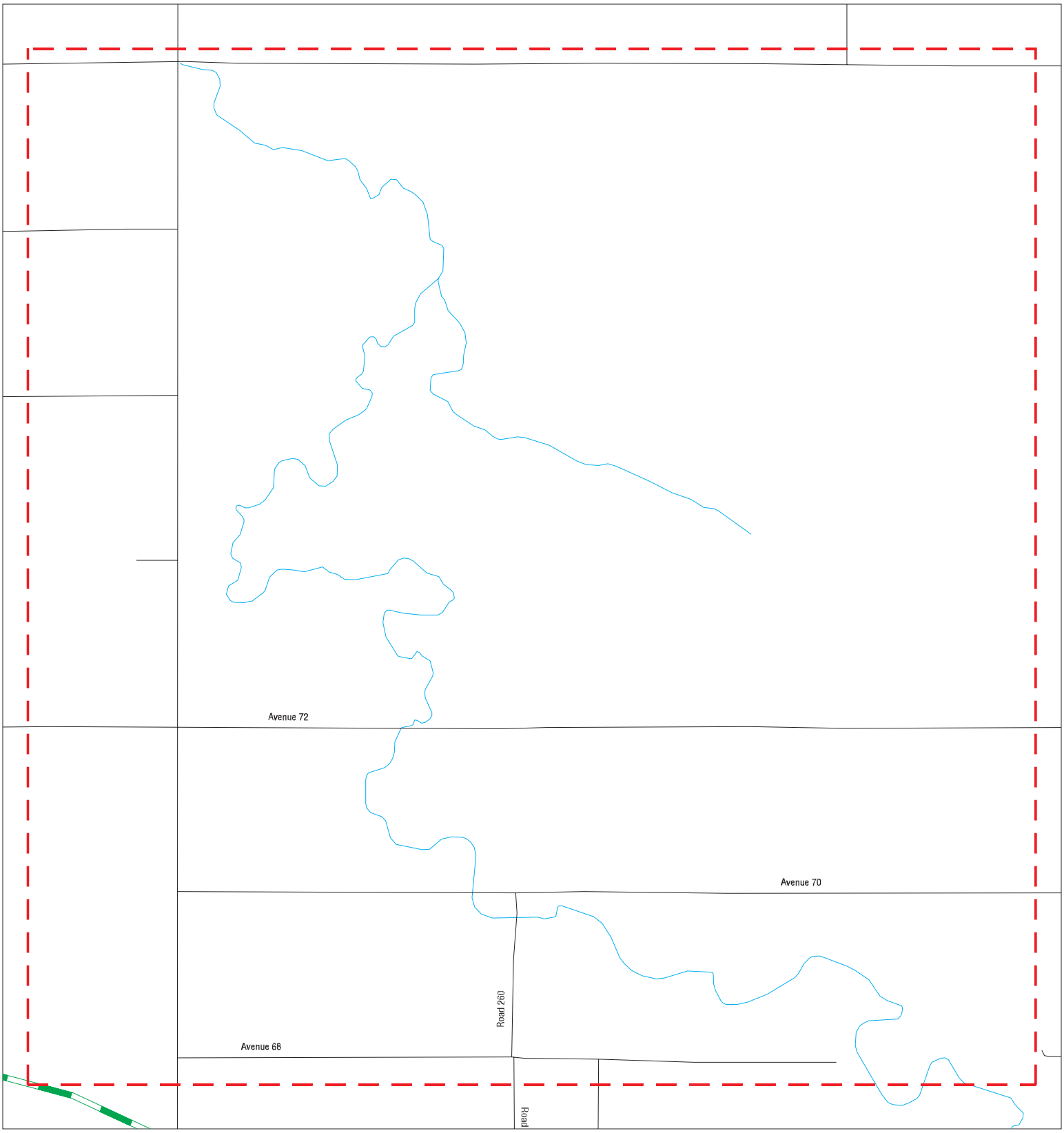
MAPPED SITES SUMMARY - FOCUS MAP 4

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 5 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

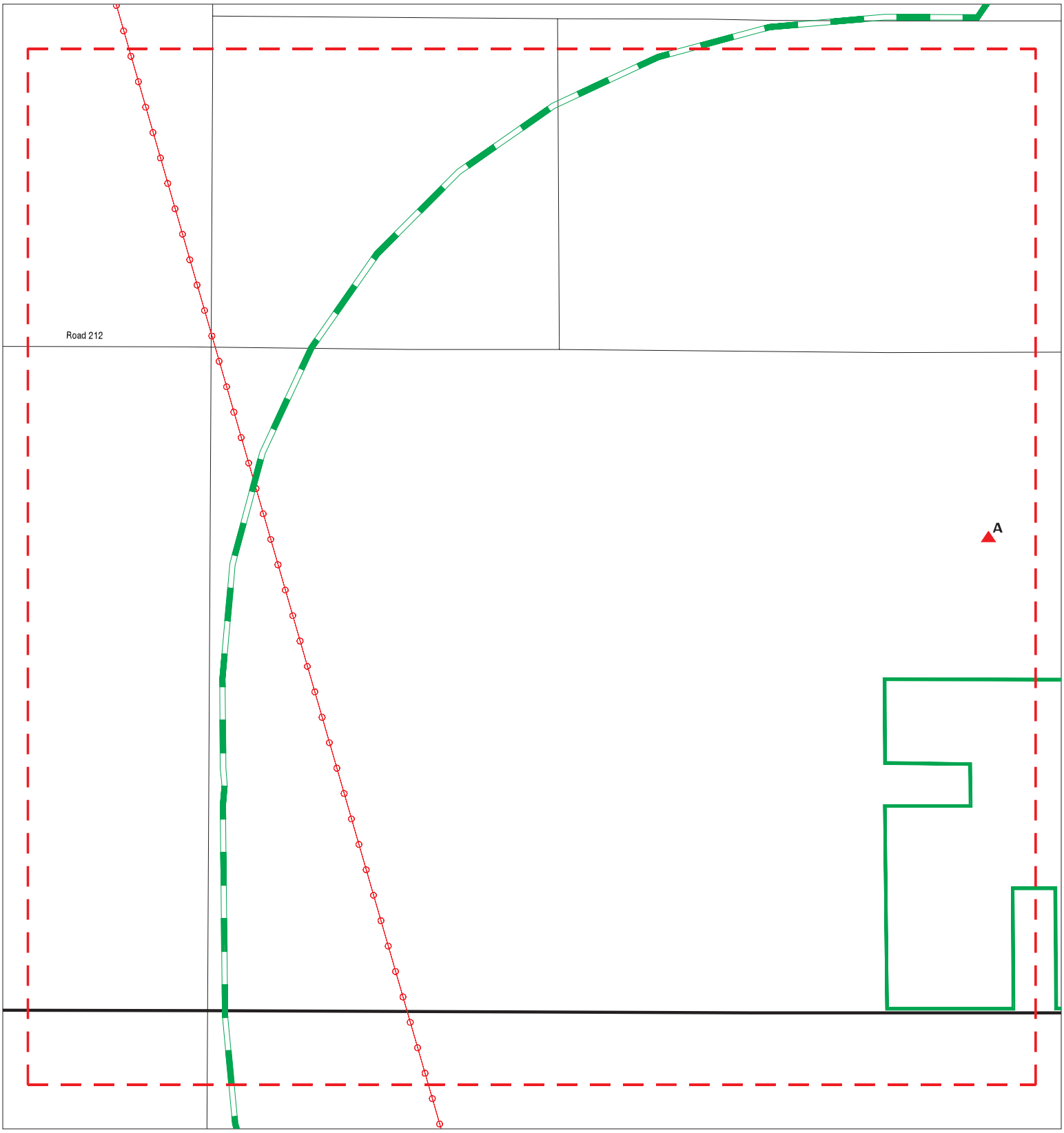
MAPPED SITES SUMMARY - FOCUS MAP 5

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 6 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

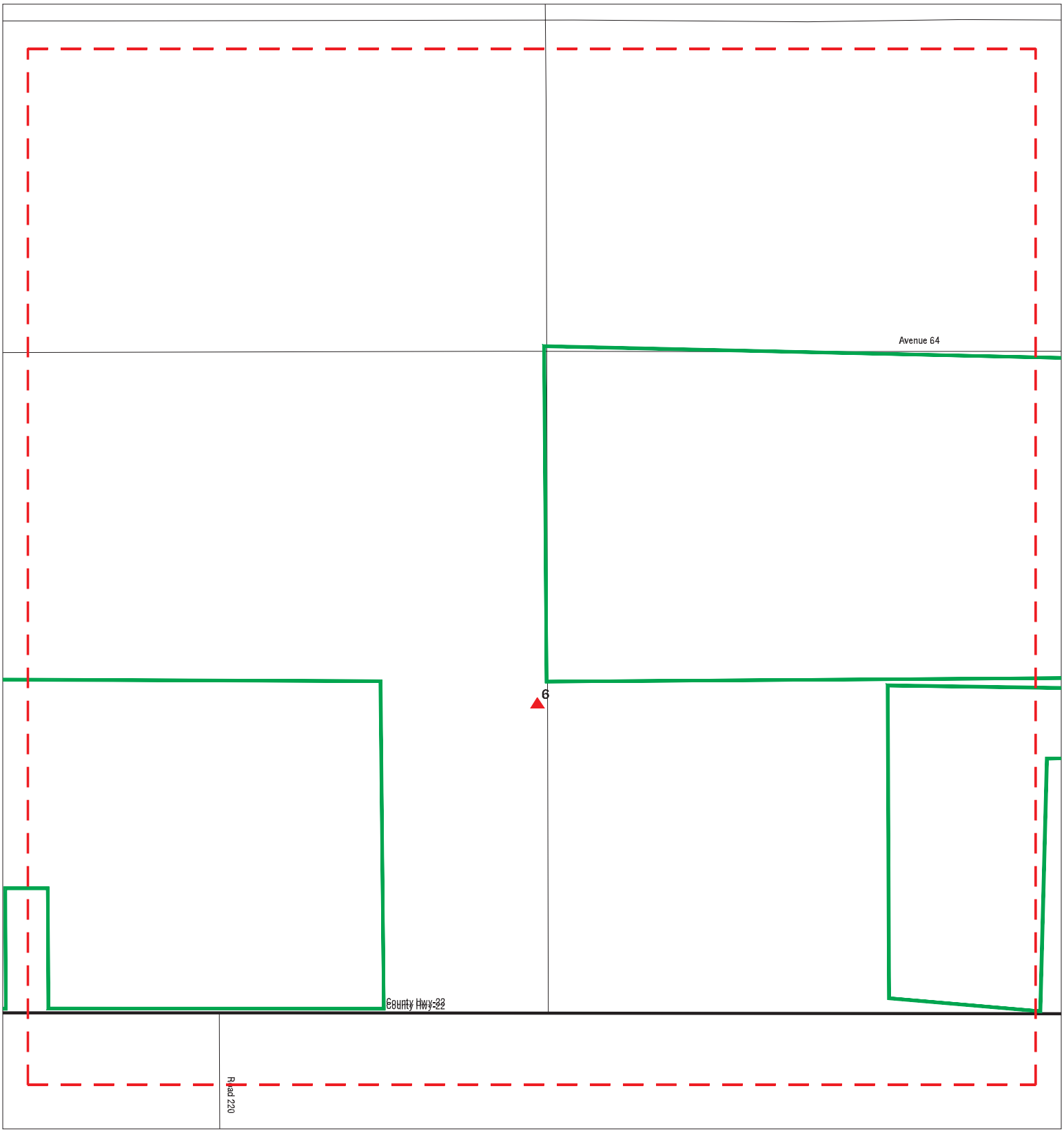
SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 6

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
A9 / 6	SPALDING RANCH / S&J	AVE 56 & RD 256	LUST	1142 0.216 North
A10 / 6	VISTA VERDE RANCH	AVENUE 2 EAST OF HWY	LUST	1142 0.216 North

Focus Map - 7 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

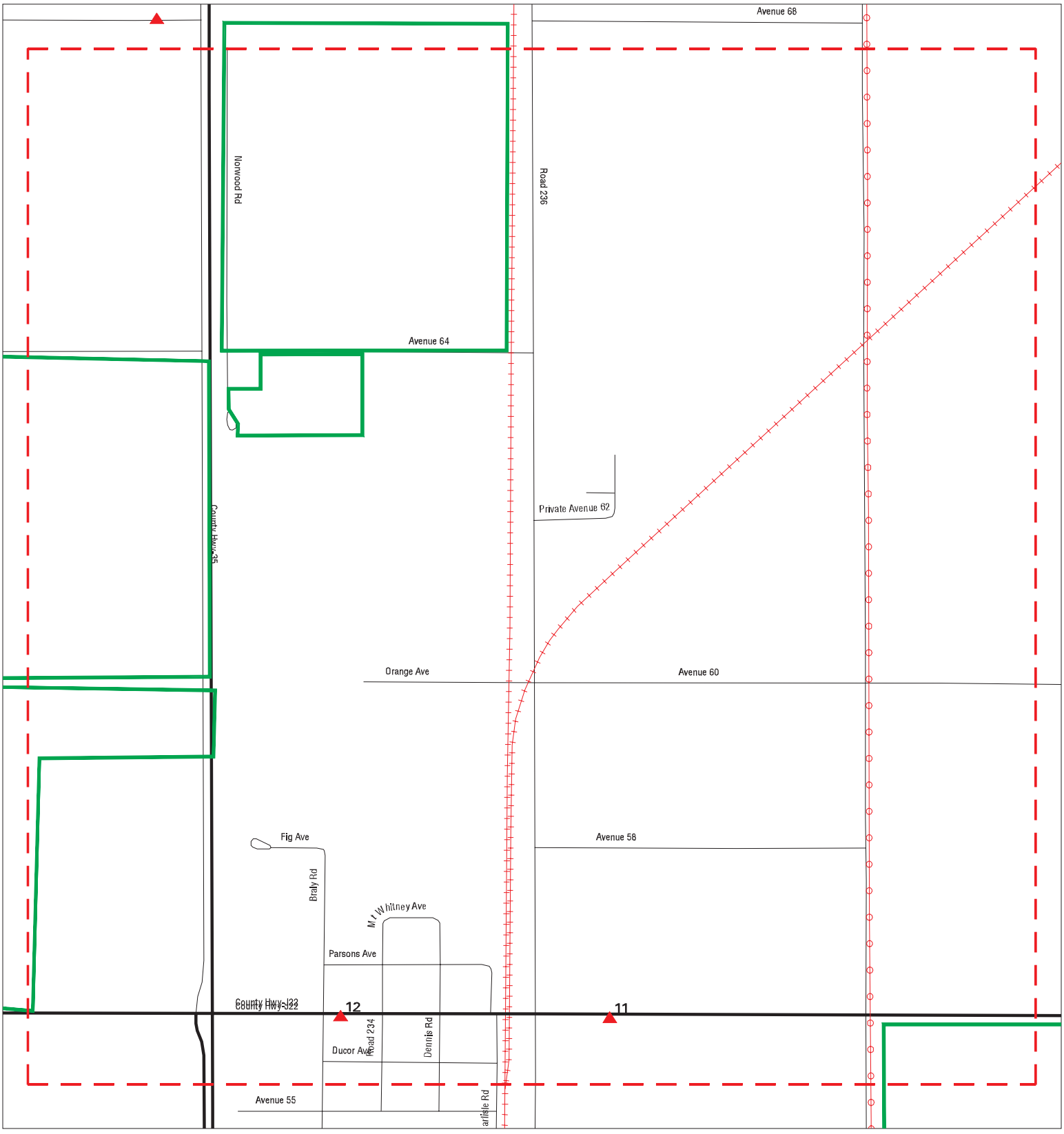
SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 7

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
6 / 7	SUN PACIFIC FARMING	5861 RD 224	CERS HAZ WASTE, CERS TANKS, CUPA Listing...	184 0.035 SSW

Focus Map - 8 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

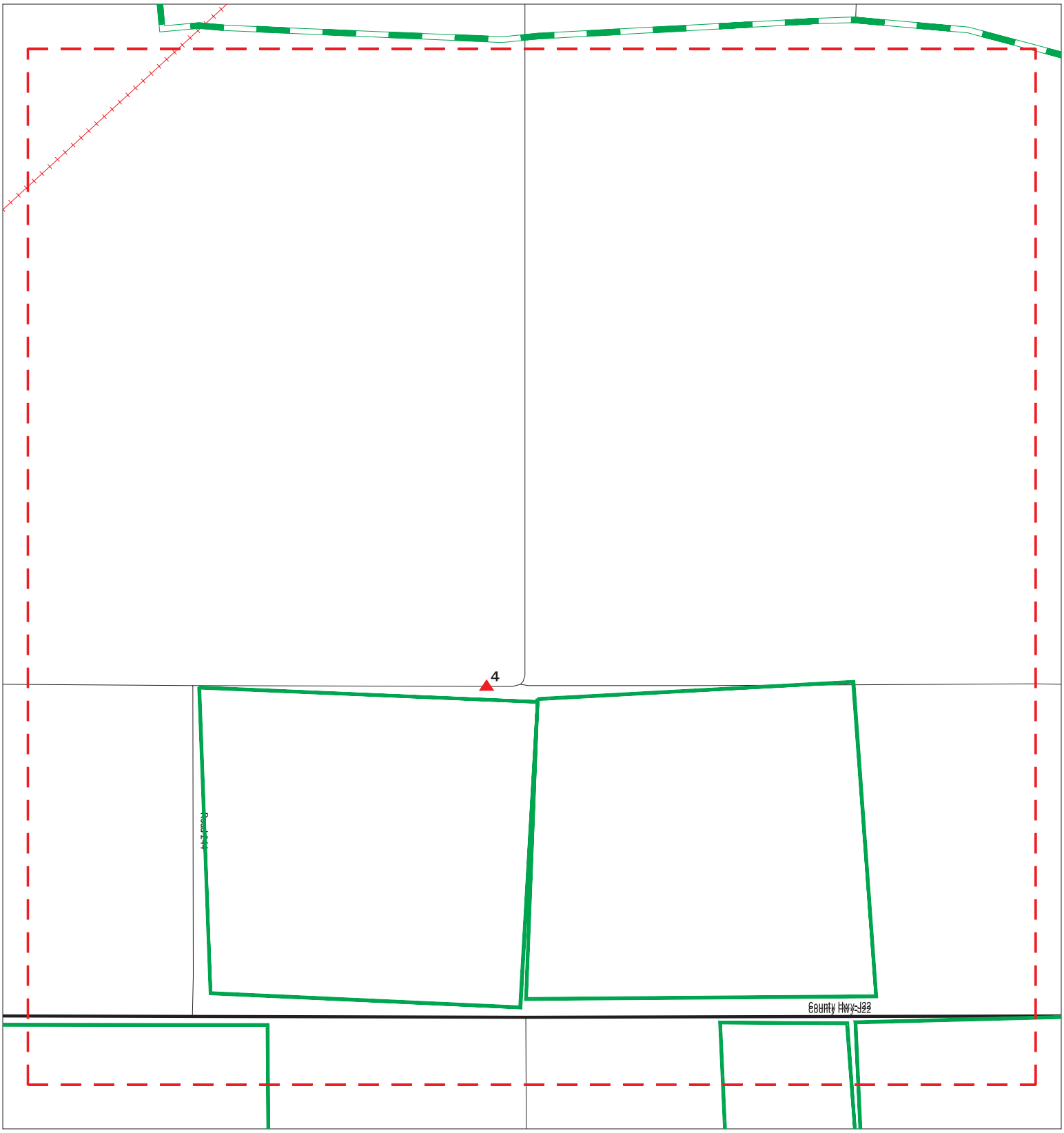
SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 8

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
11 / 8	DUCOR ELEMENTARY	23761 AVE 56	LUST, HIST CORTESE, CERS	2186 0.414 West
12 / 8	DUCOR HANDY MARKET	23314 AVE 56	LUST, UST, EMI	2301 0.436 SSE

Focus Map - 9 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

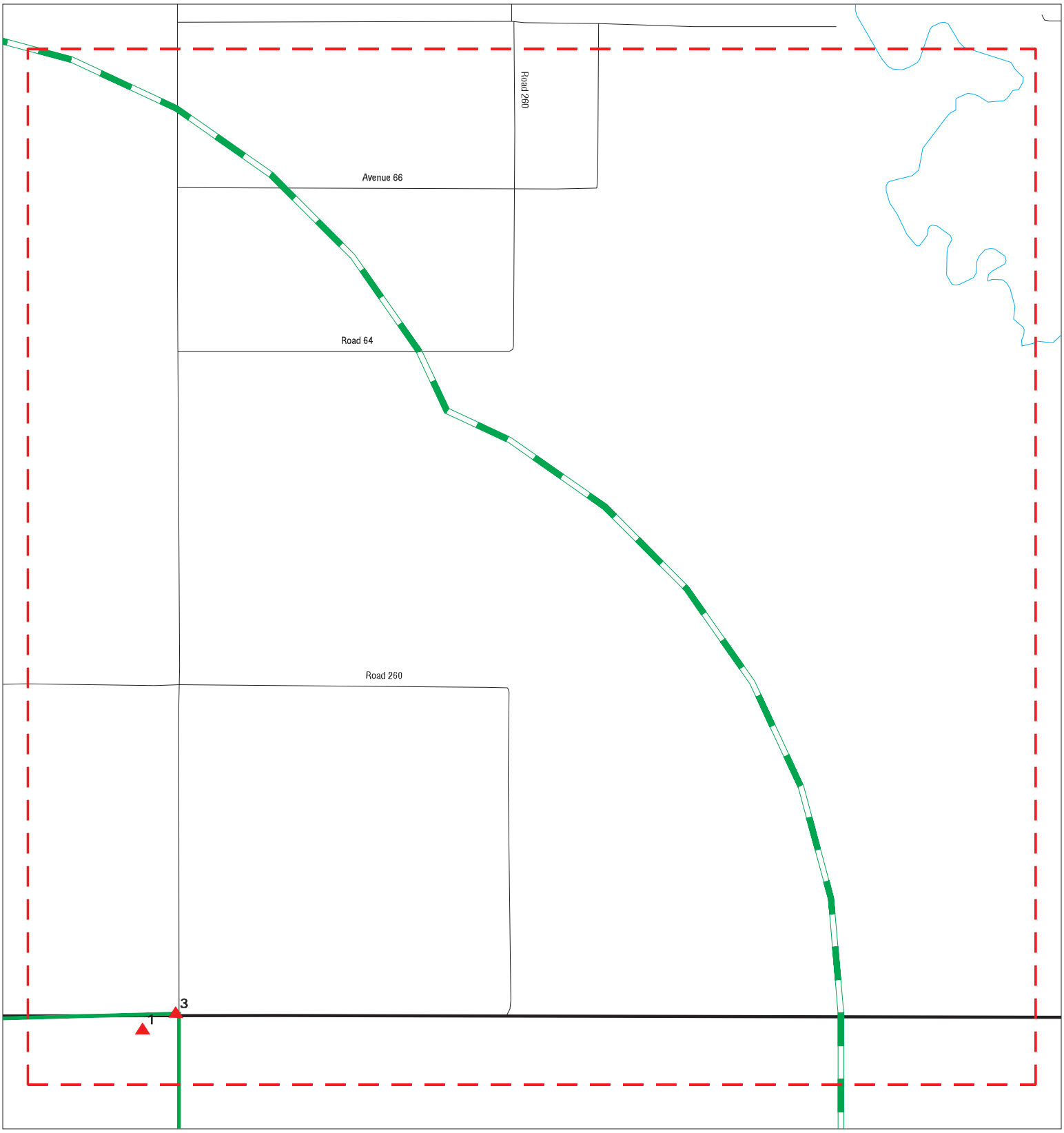
SITE NAME: Rexford ADDRESS: State Route 65 CITY/STATE: California Hot Sprin CA ZIP: 93207	CLIENT: Technicon Engineering Service CONTACT: Steve Curra INQUIRY #: 5815145.2s DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 9

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
4 / 9	RAYMOND S CAMBALIK	248 ROAD AND 60 AVE	HIST UST	117 0.022 North

Focus Map - 10 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

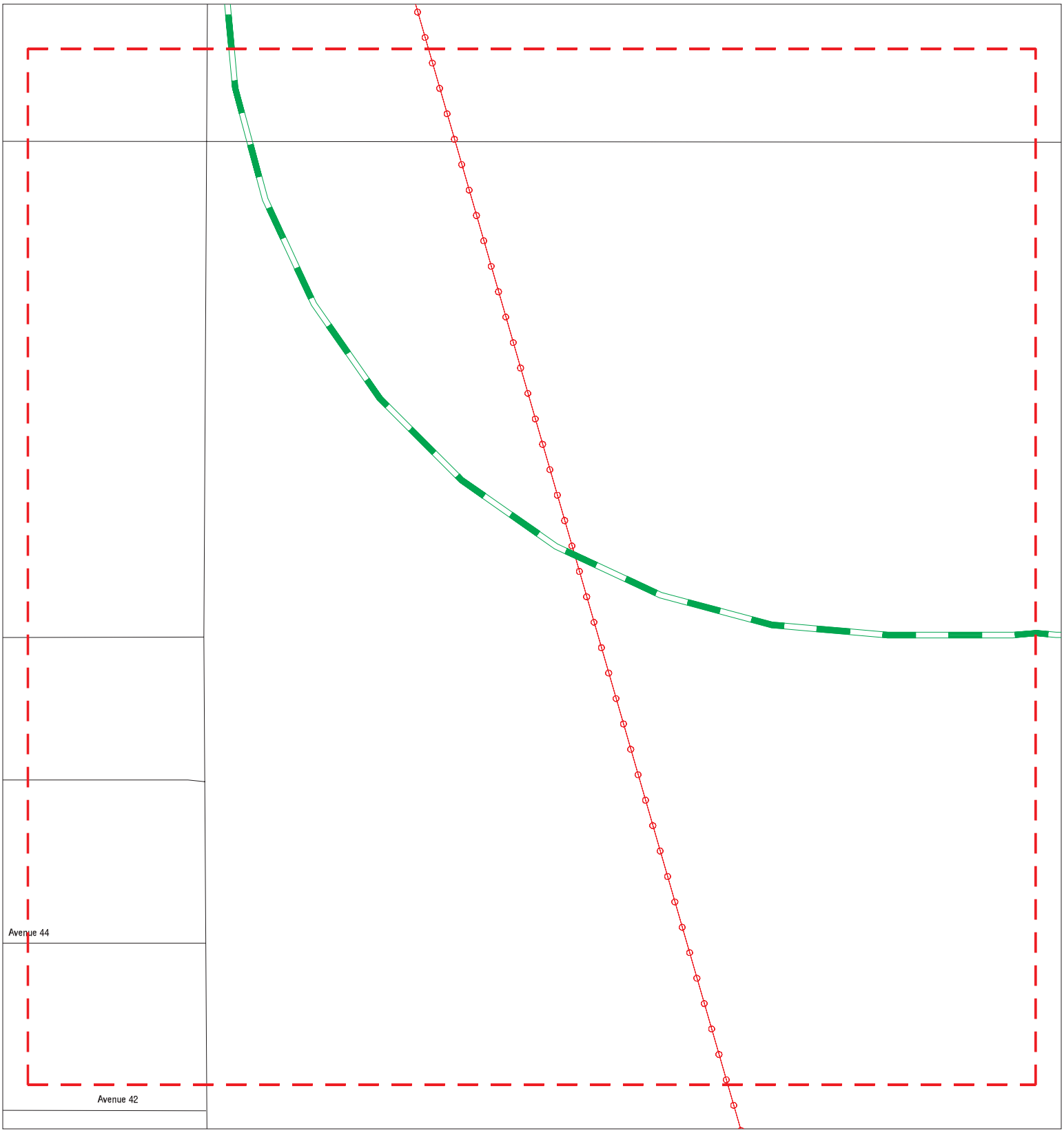
SITE NAME: Rexford ADDRESS: State Route 65 CITY/STATE: California Hot Sprin CA ZIP: 93207	CLIENT: Technicon Engineering Service CONTACT: Steve Curra INQUIRY #: 5815145.2s DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 10

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
1 / 10		AVE 80 / RD 272	CHMIRS	TP
3 / 10	SPALDING RANCH / S&J	AVE 56 & RD 256	LUST, HIST CORTESE, CERS	13 0.002 North

Focus Map - 11 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford ADDRESS: State Route 65 CITY/STATE: California Hot Sprin CA ZIP: 93207	CLIENT: Technicon Engineering Service CONTACT: Steve Curra INQUIRY #: 5815145.2s DATE: 10/03/19

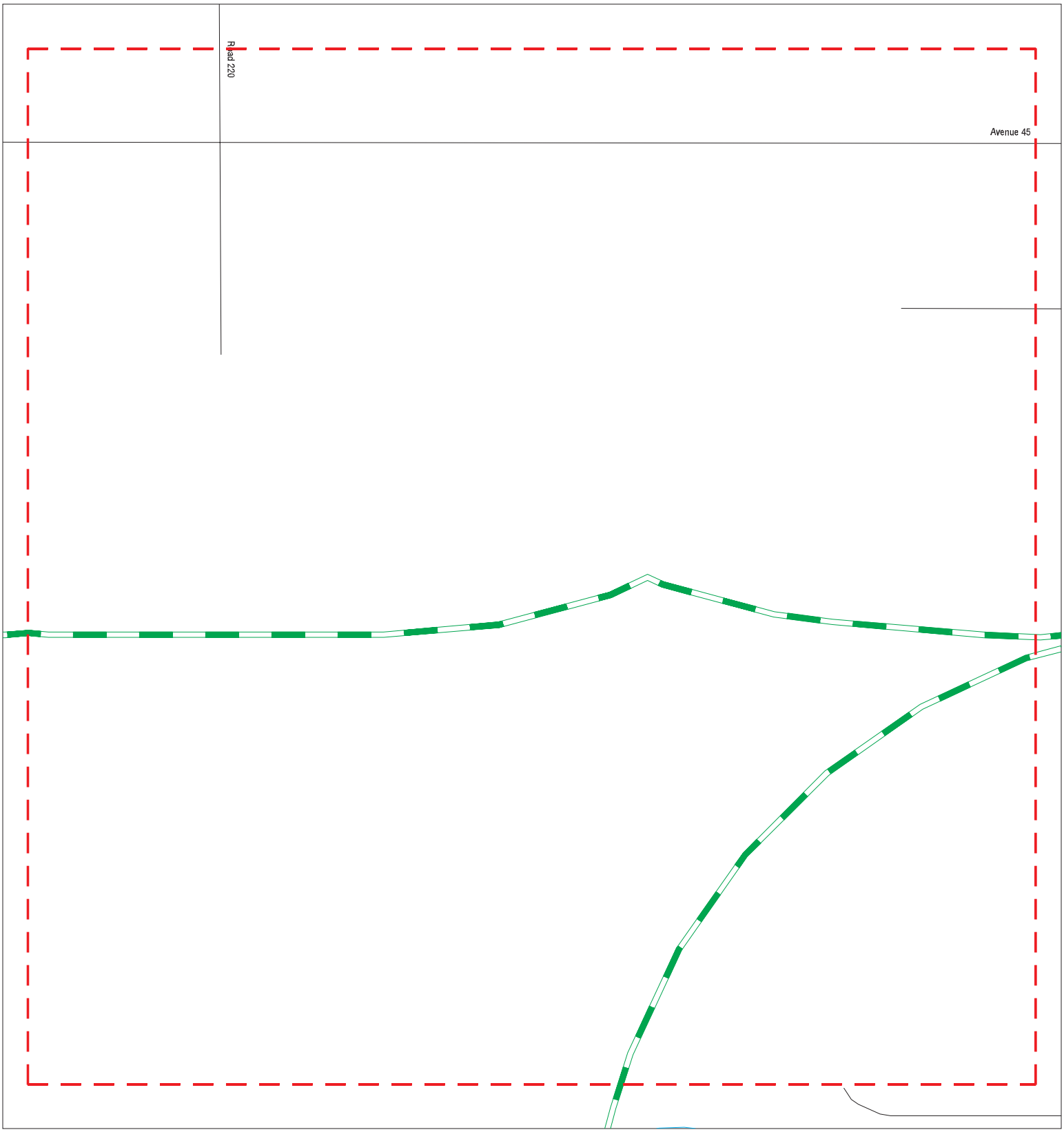
MAPPED SITES SUMMARY - FOCUS MAP 11

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 12 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

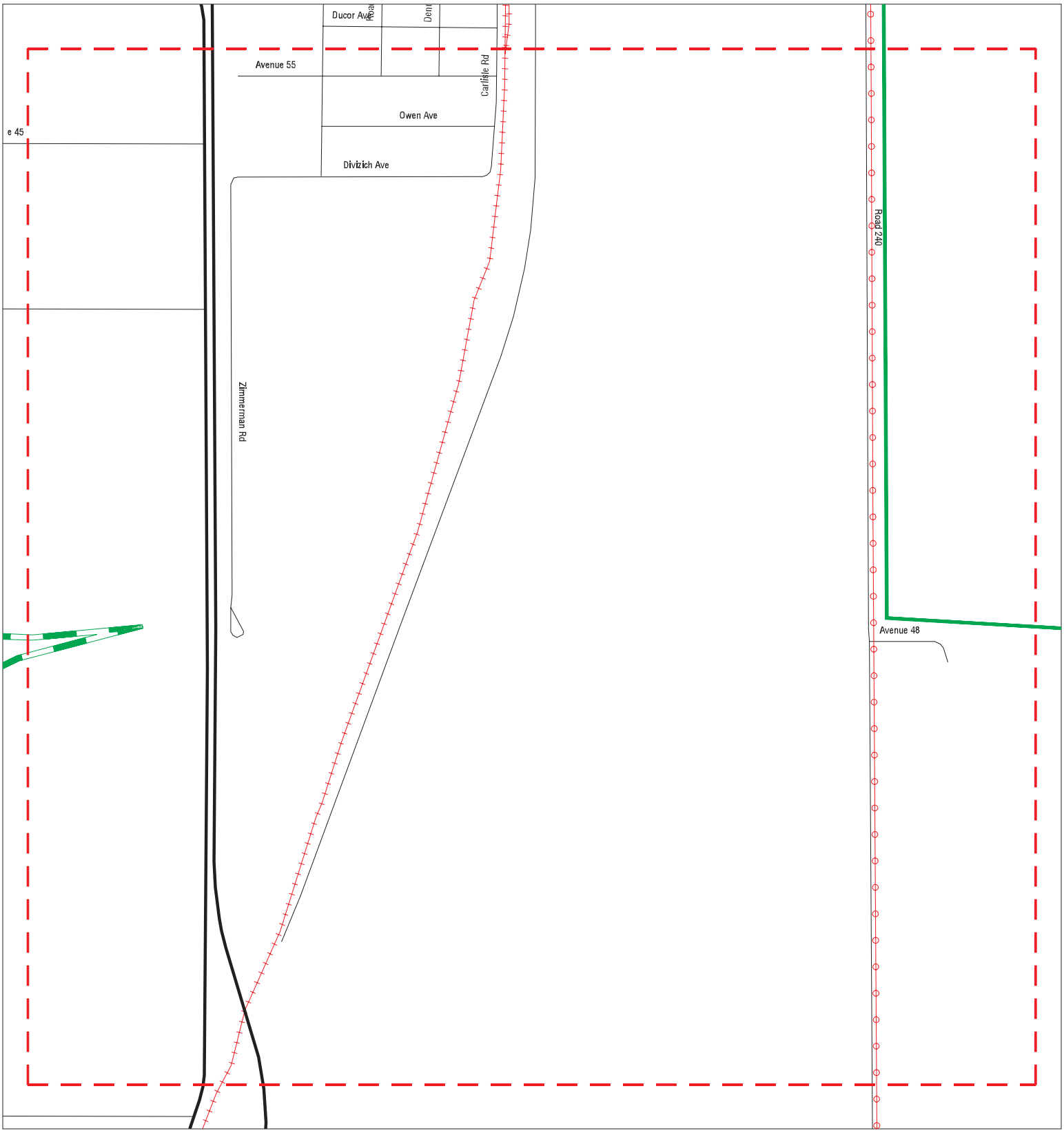
MAPPED SITES SUMMARY - FOCUS MAP 12

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 13 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

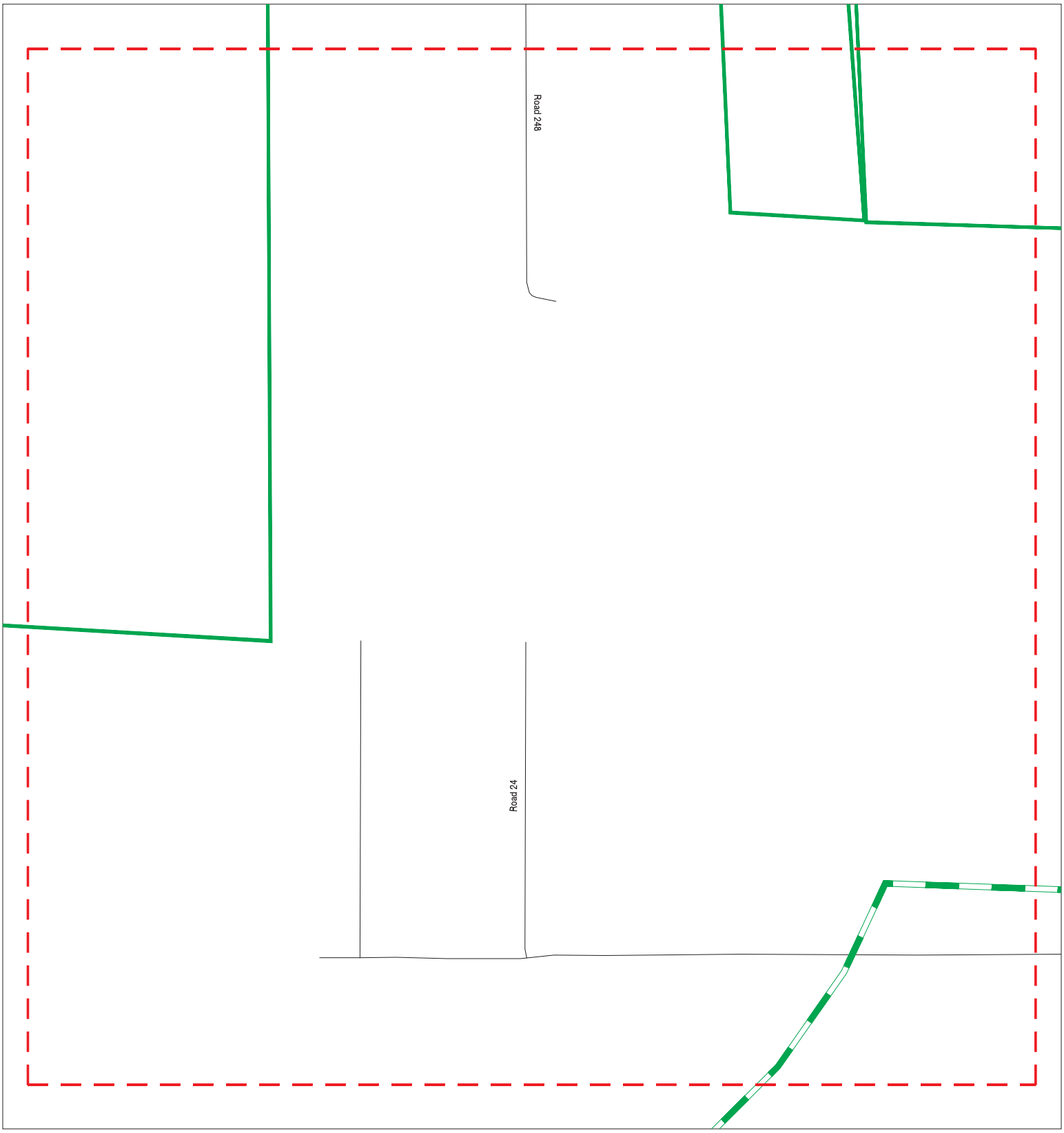
MAPPED SITES SUMMARY - FOCUS MAP 13

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 14 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

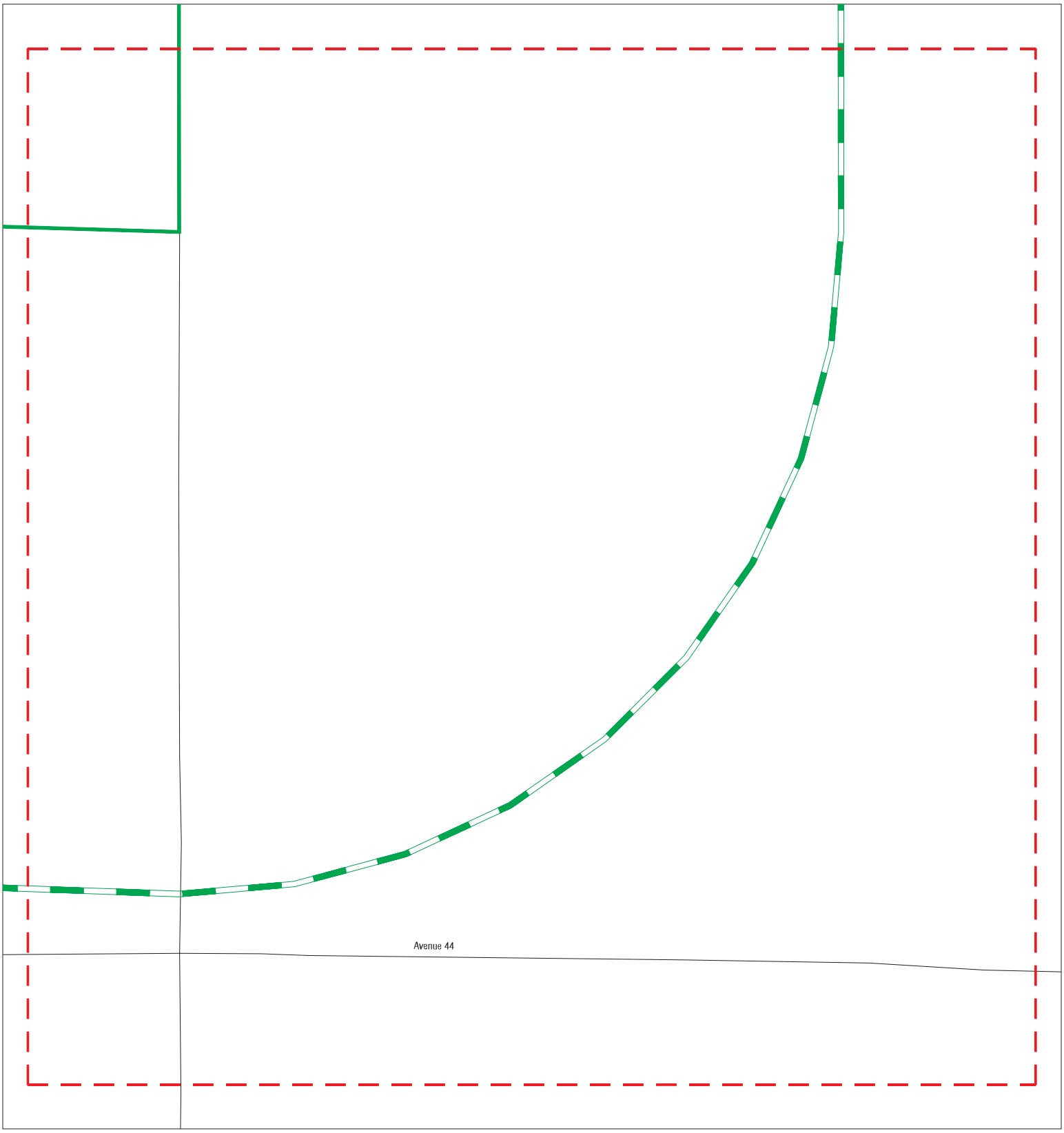
MAPPED SITES SUMMARY - FOCUS MAP 14

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 15 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME:	Rexford	CLIENT:	Technicon Engineering Service
ADDRESS:	State Route 65	CONTACT:	Steve Curra
CITY/STATE:	California Hot Sprin CA	INQUIRY #:	5815145.2s
ZIP:	93207	DATE:	10/03/19

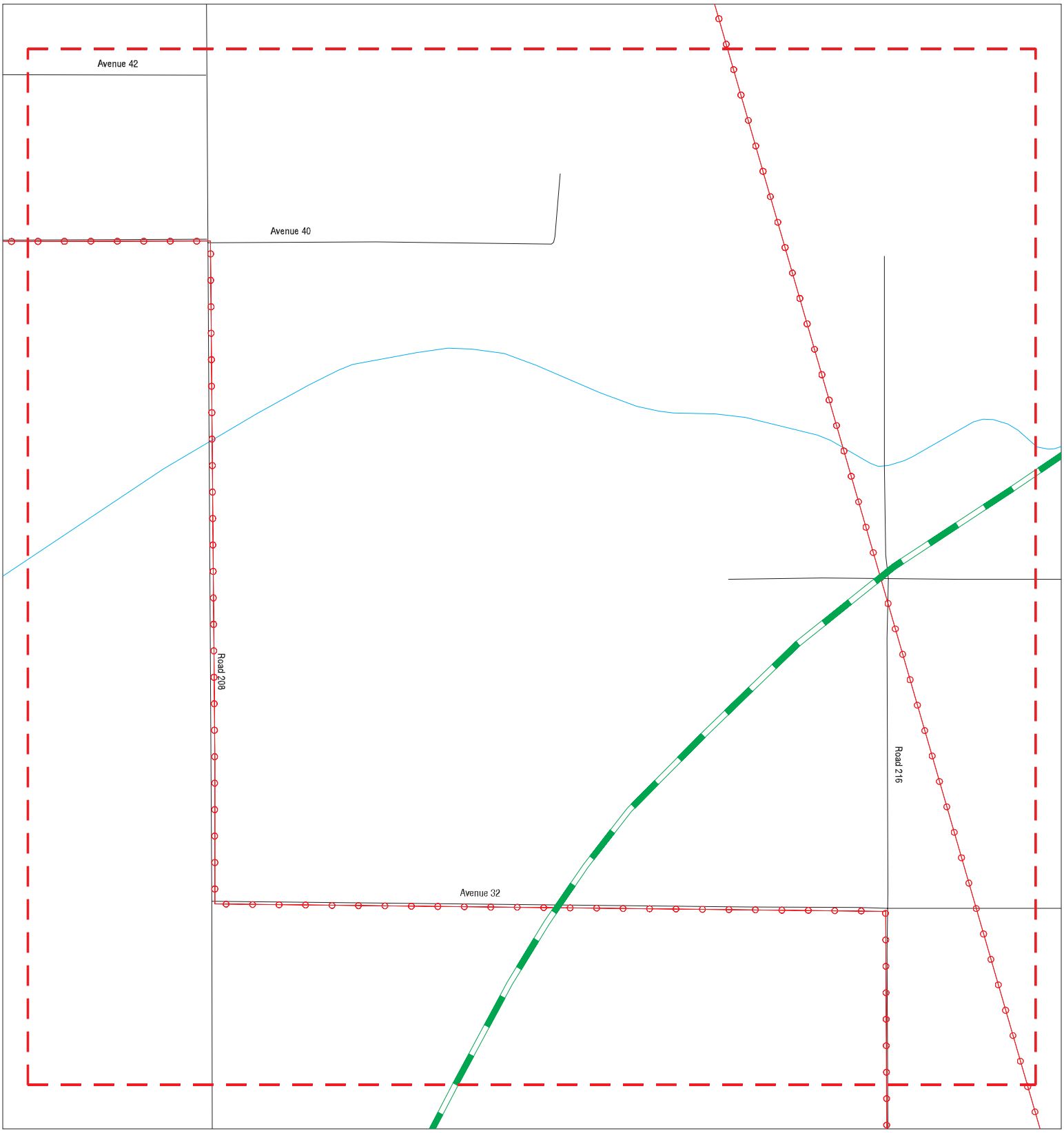
MAPPED SITES SUMMARY - FOCUS MAP 15

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 16 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

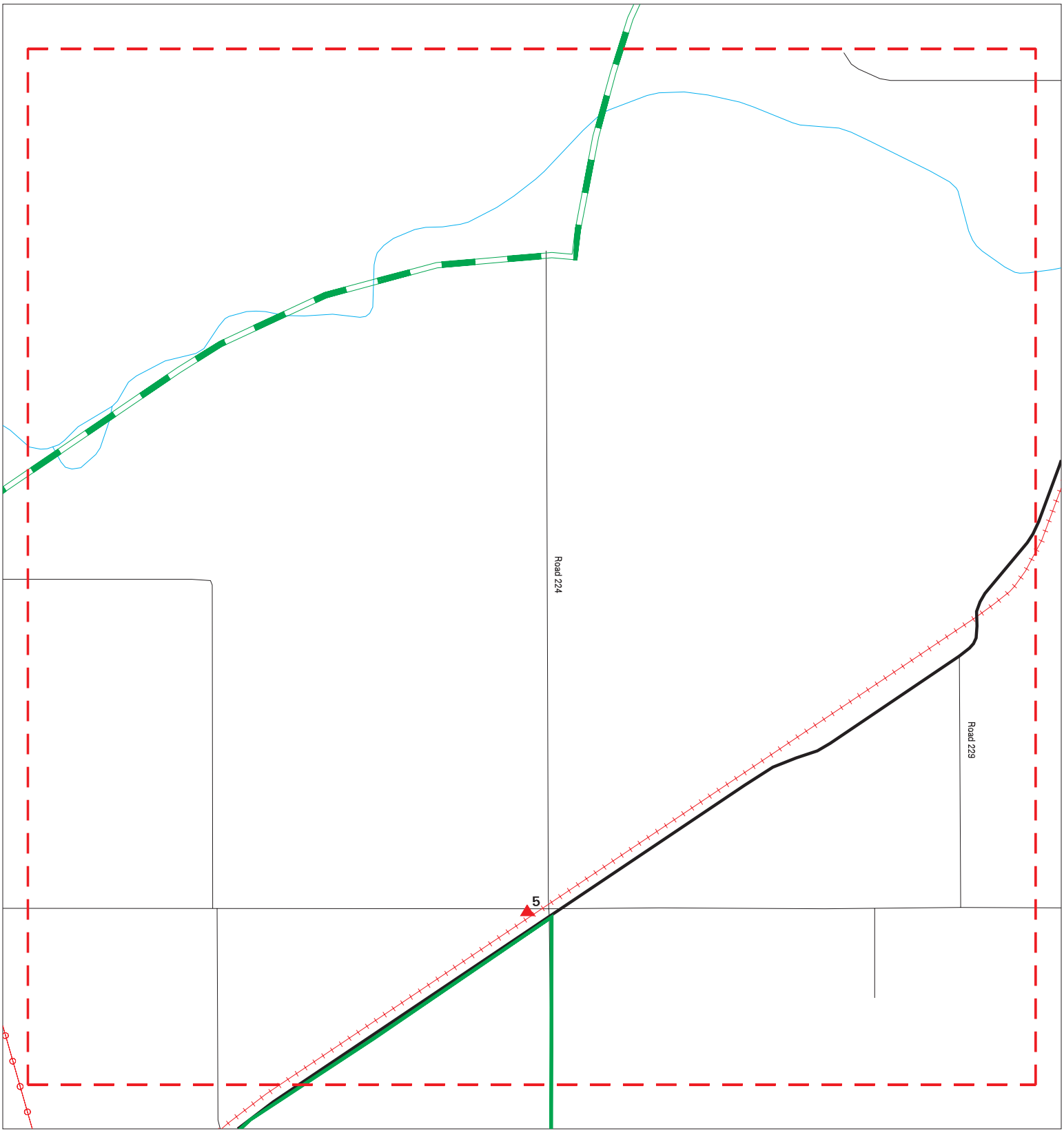
MAPPED SITES SUMMARY - FOCUS MAP 16

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 17 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

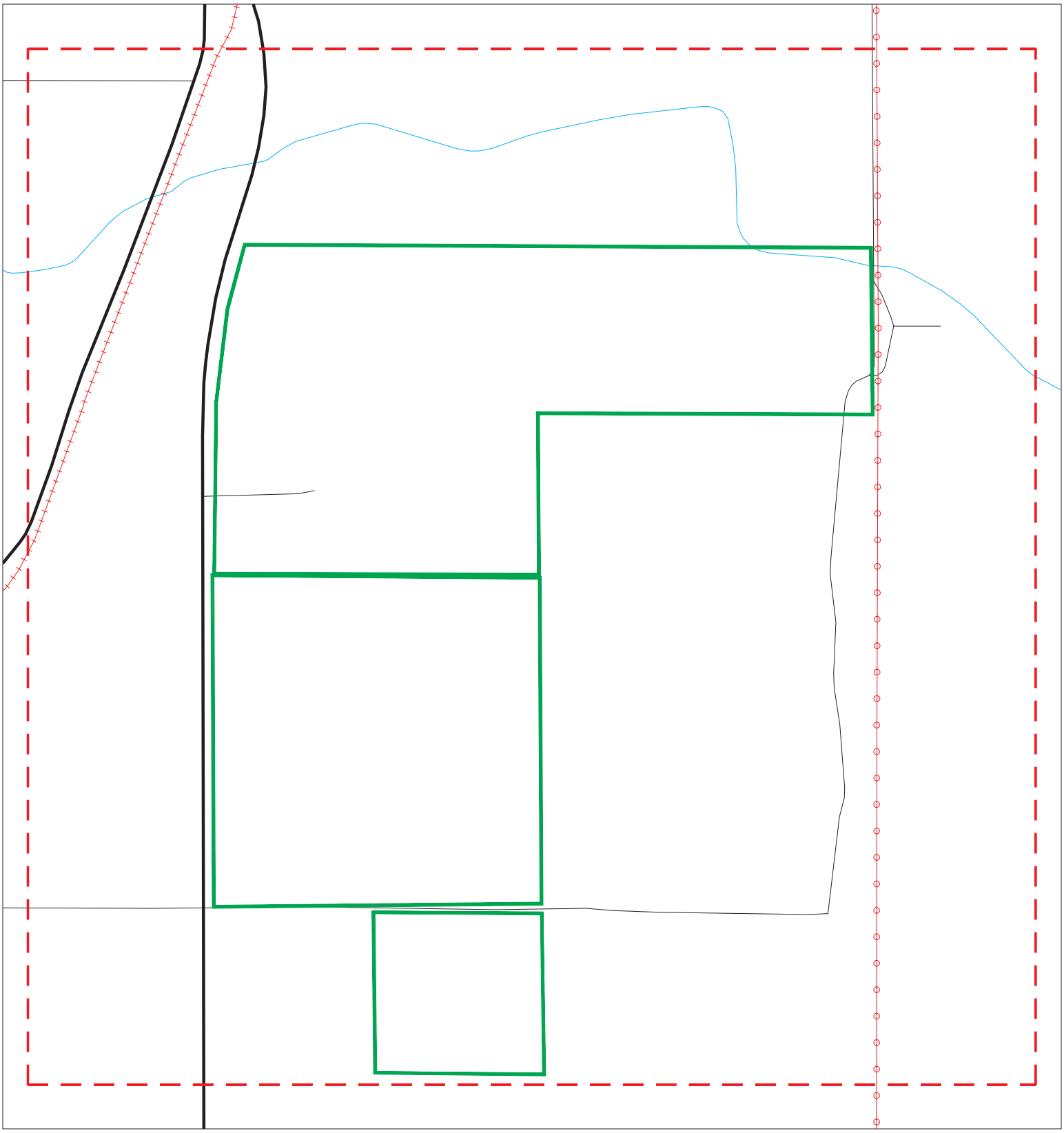
SITE NAME: Rexford ADDRESS: State Route 65 CITY/STATE: California Hot Sprin CA ZIP: 93207	CLIENT: Technicon Engineering Service CONTACT: Steve Curra INQUIRY #: 5815145.2s DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 17

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
5 / 17	CED DUCOR SOLAR 1	22389 AVENUE 32	AST	155 0.029 NW

Focus Map - 18 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

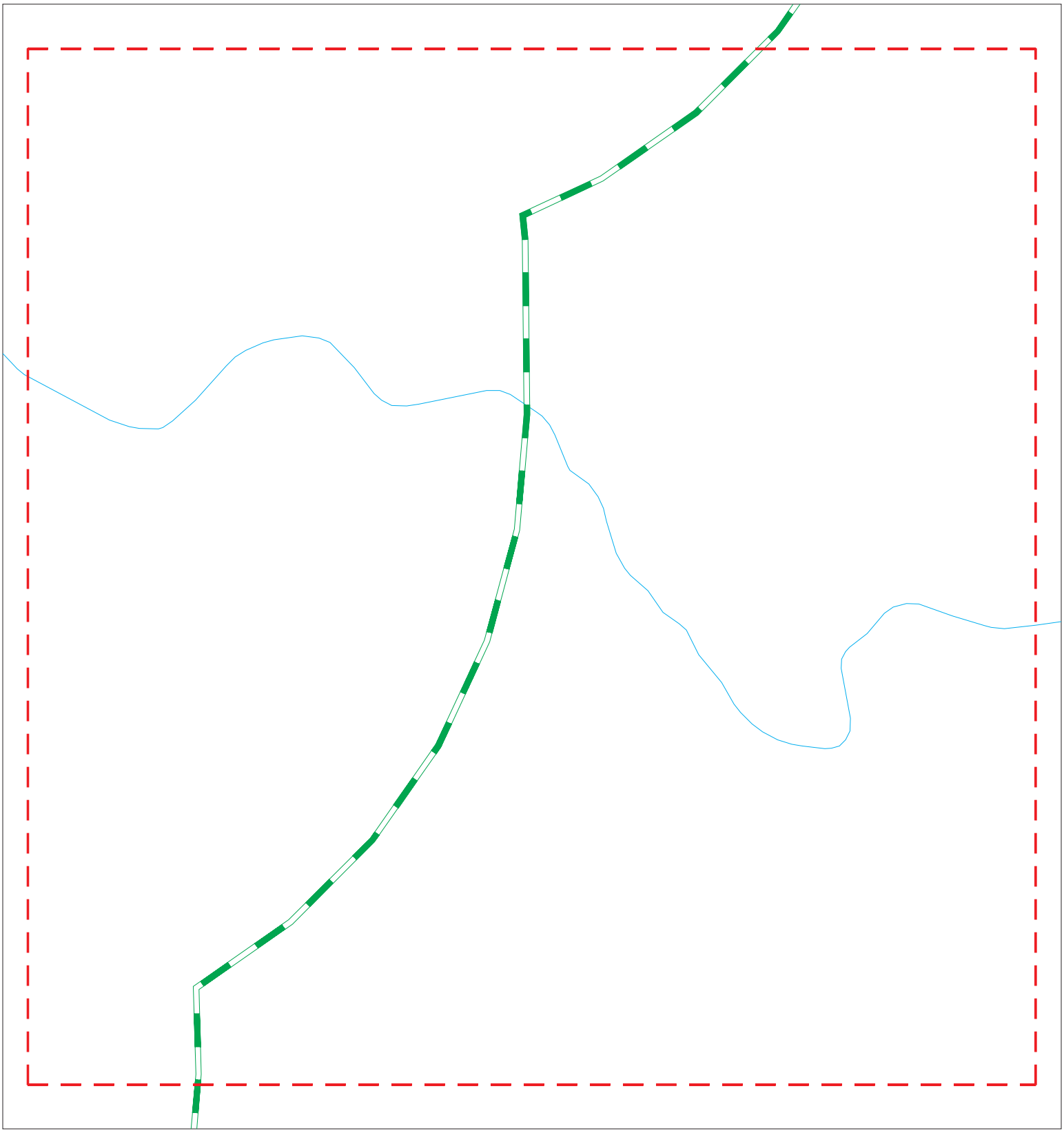
MAPPED SITES SUMMARY - FOCUS MAP 18

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 19 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

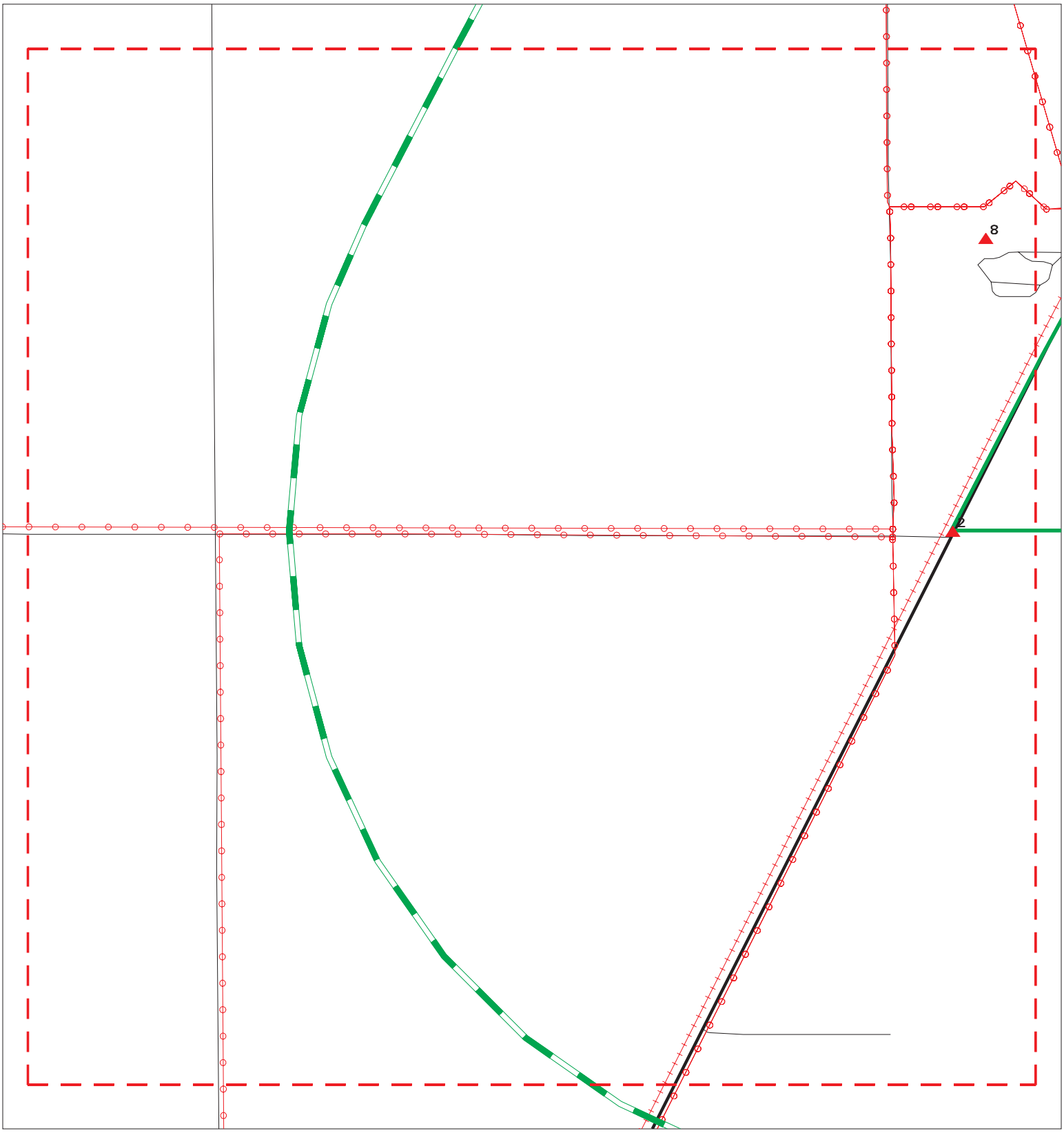
MAPPED SITES SUMMARY - FOCUS MAP 19

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 20 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

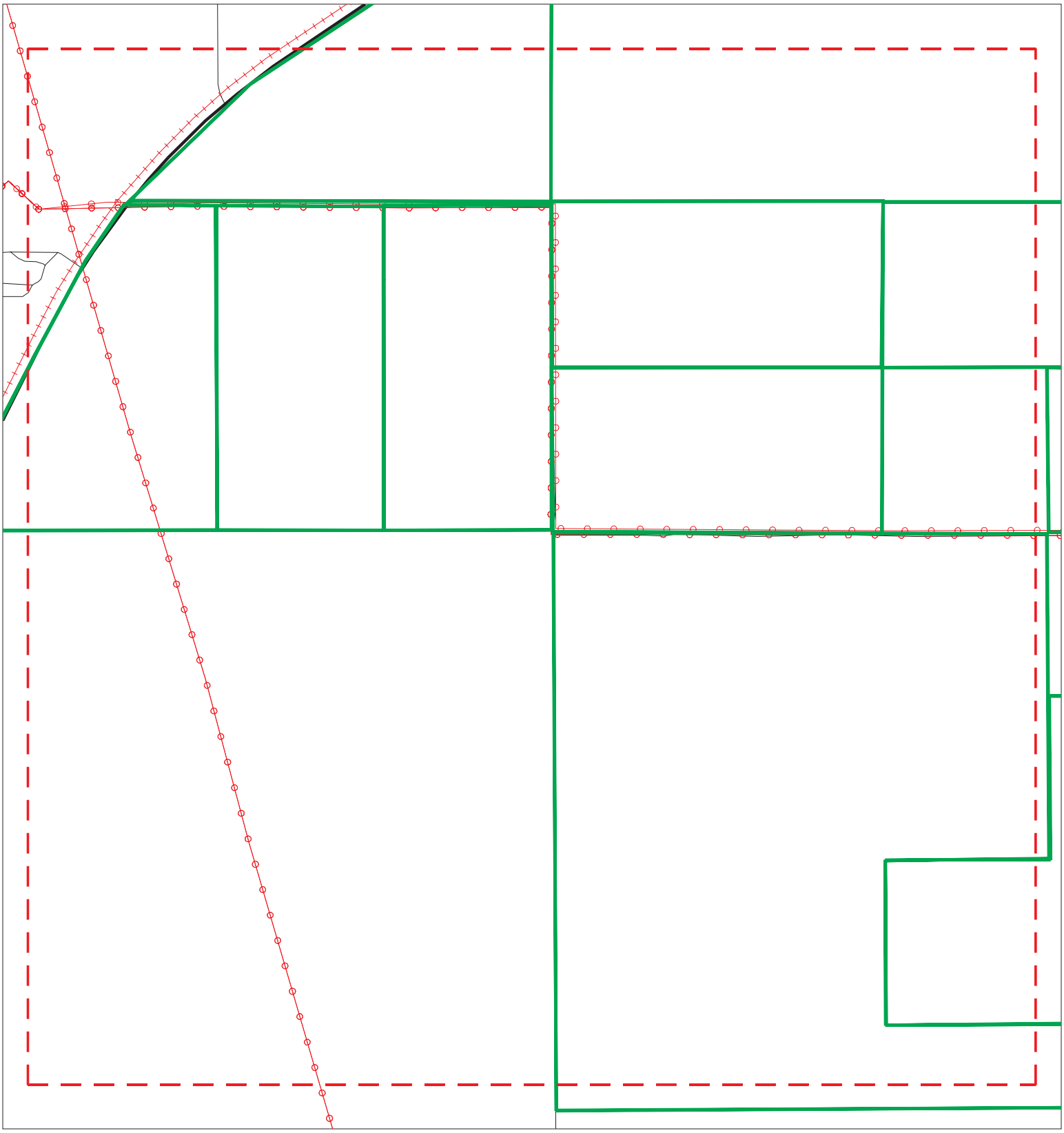
SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 20

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION
2 / 20	M. HURE & SON COLD S	RICHGROVE DRIVE & AV	CPS-SLIC, CERS	5 0.001
8 / 20	SCE - VESTAL SUBSTAT	RICHGROVE DR	CUPA Listings	837 0.159 WNW

Focus Map - 21 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

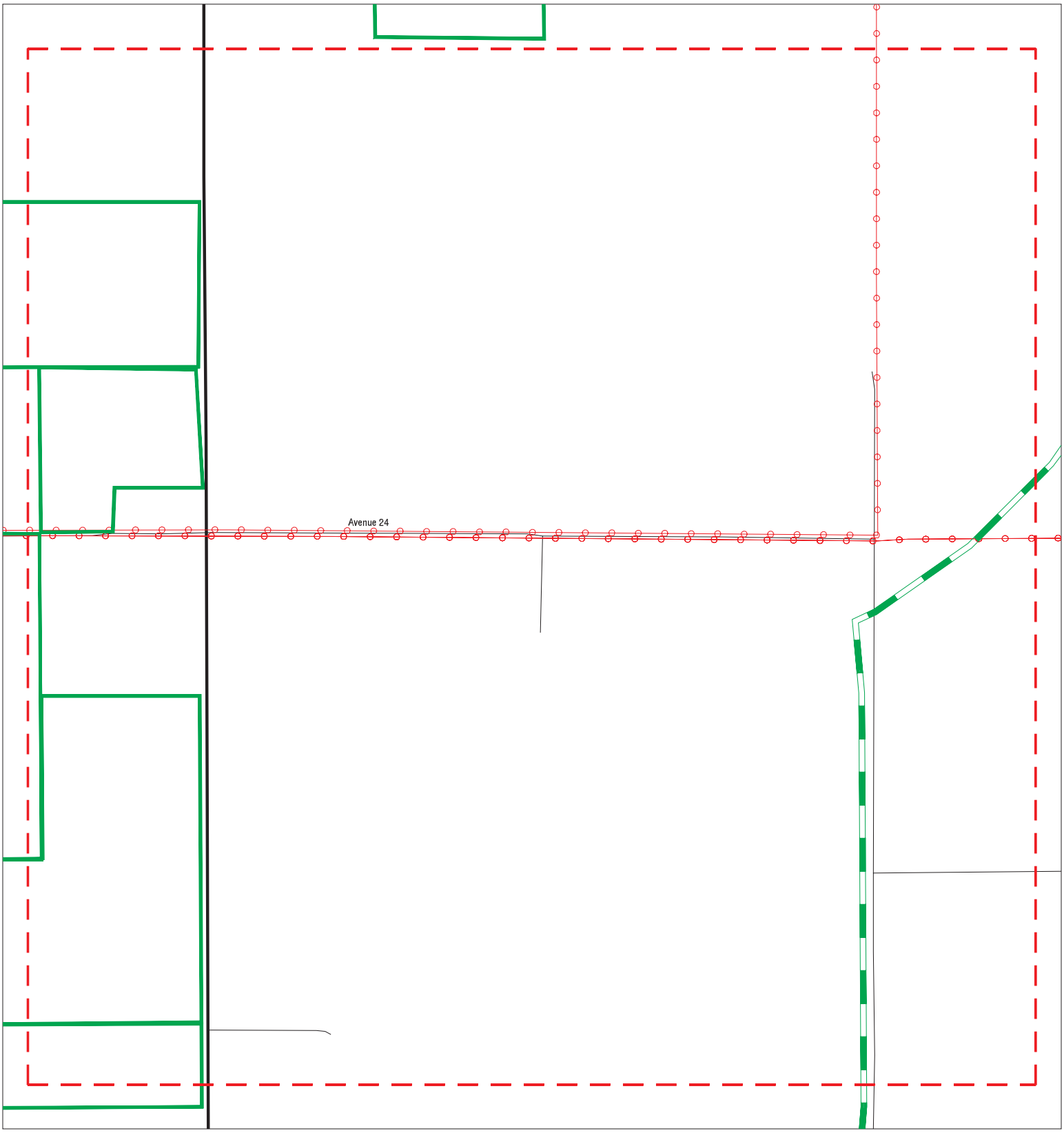
MAPPED SITES SUMMARY - FOCUS MAP 21

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 22 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

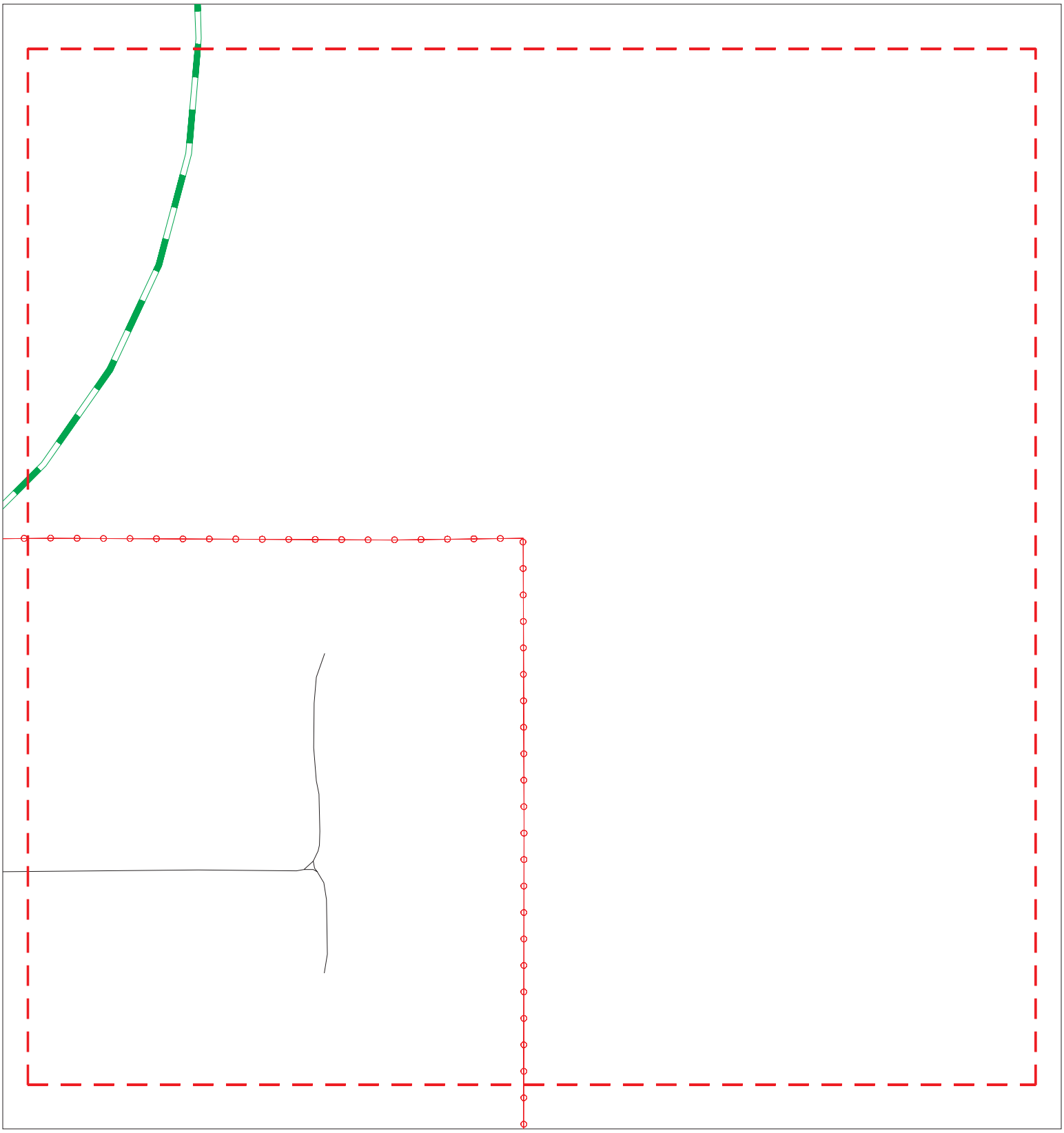
MAPPED SITES SUMMARY - FOCUS MAP 22

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 23 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

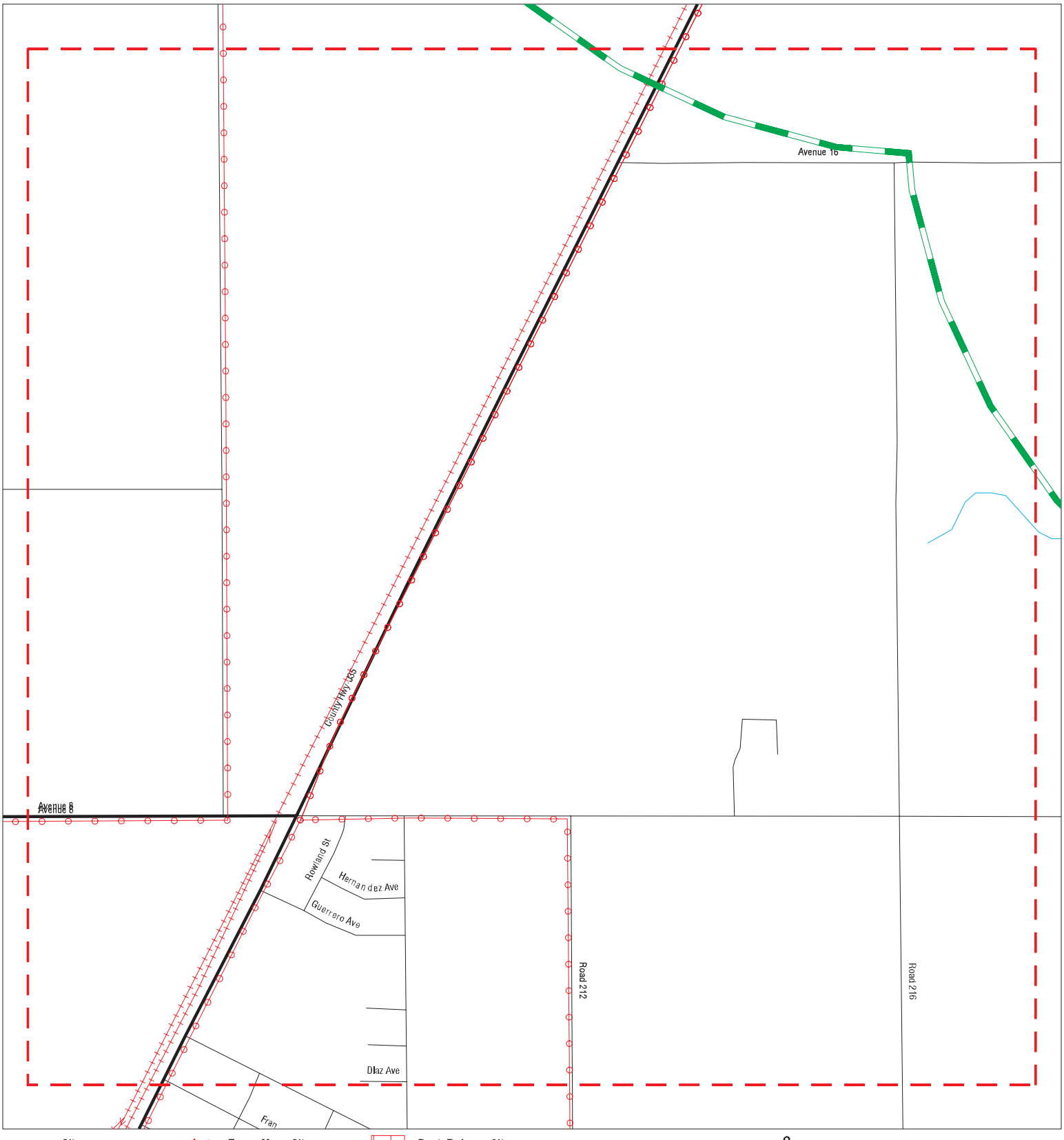
MAPPED SITES SUMMARY - FOCUS MAP 23

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 24 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

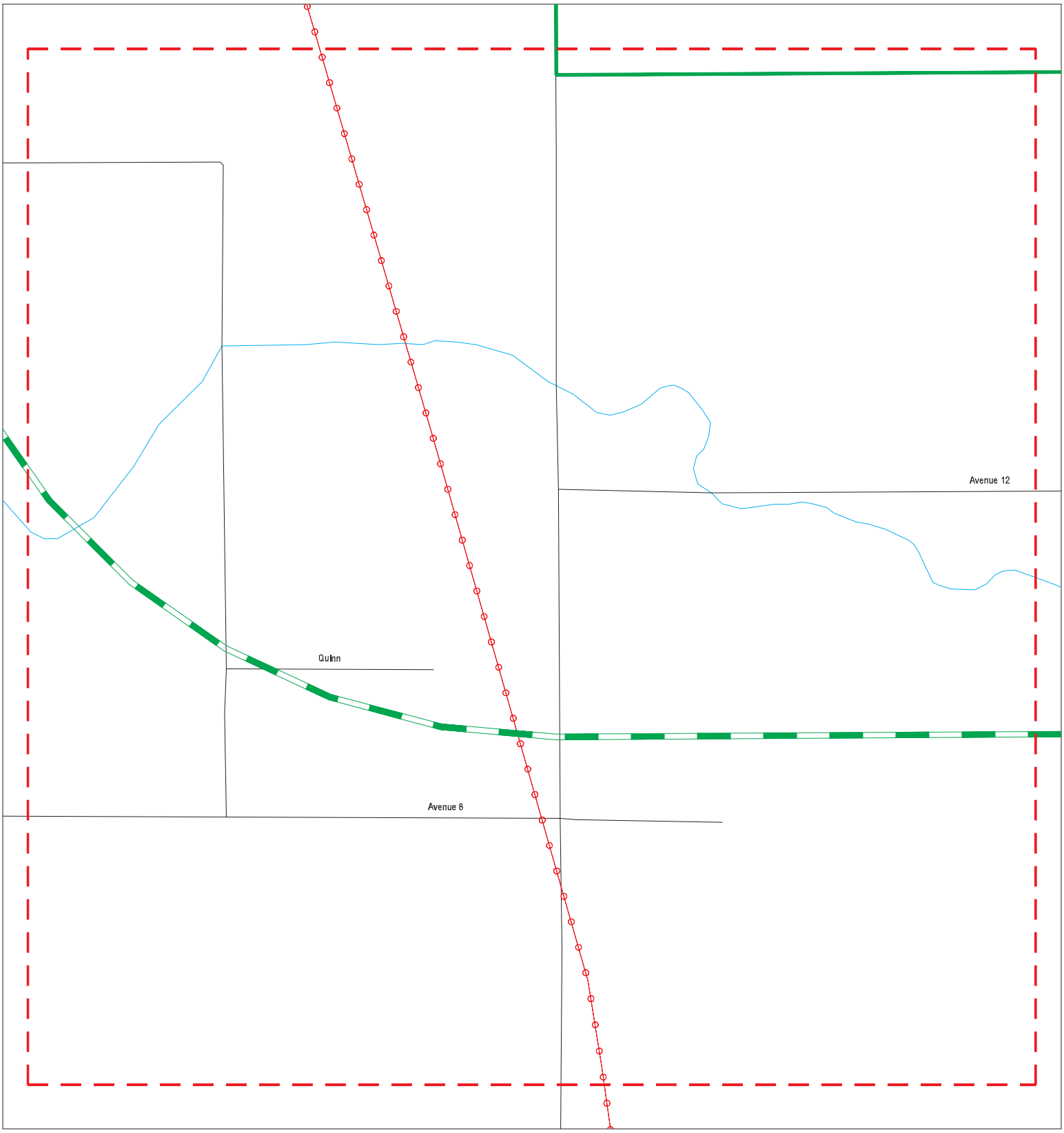
MAPPED SITES SUMMARY - FOCUS MAP 24

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 25 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford	CLIENT: Technicon Engineering Service
ADDRESS: State Route 65	CONTACT: Steve Curra
CITY/STATE: California Hot Sprin CA	INQUIRY #: 5815145.2s
ZIP: 93207	DATE: 10/03/19

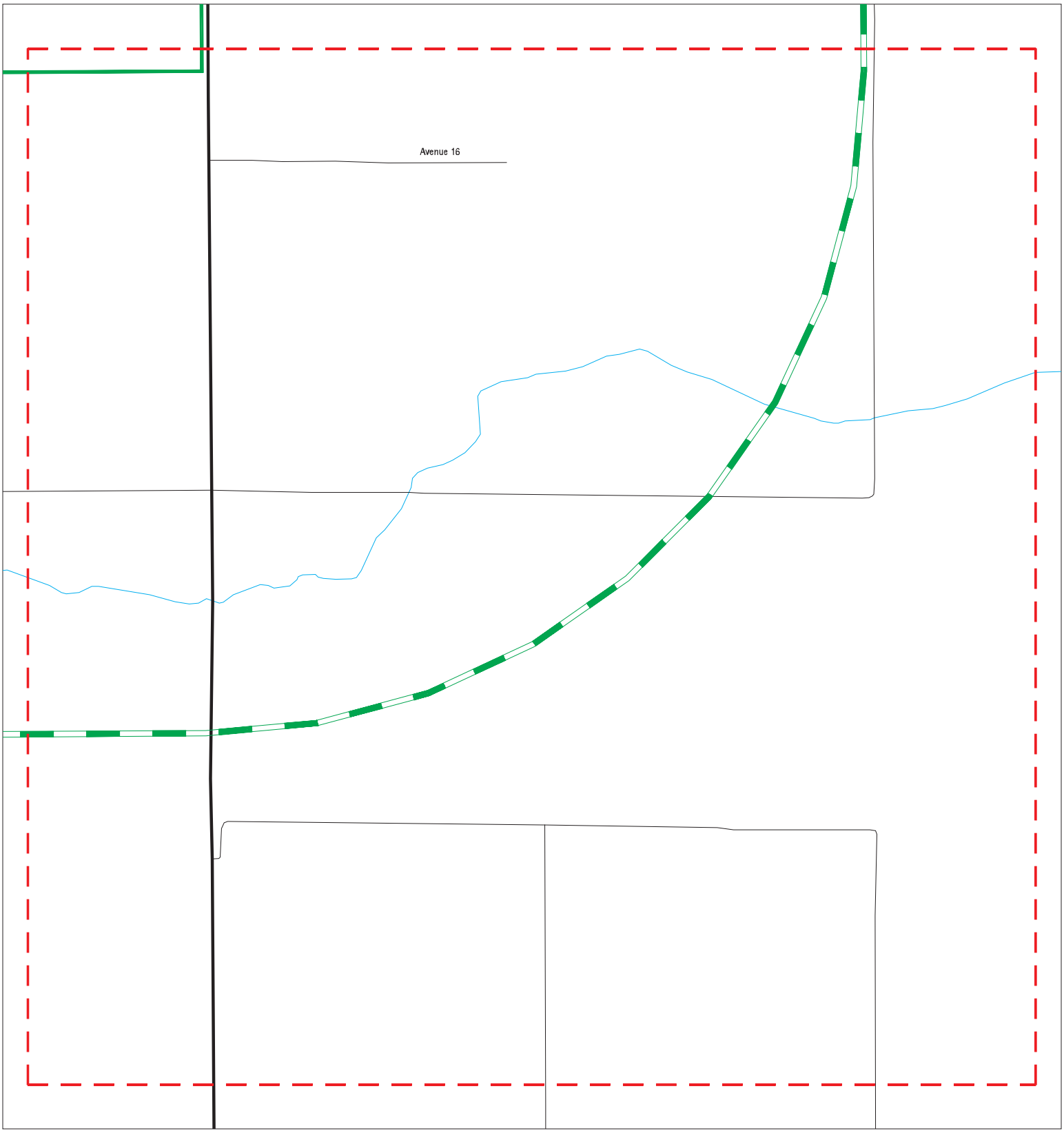
MAPPED SITES SUMMARY - FOCUS MAP 25

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

Focus Map - 26 - 5815145.2s



Sites
Target Property
Search Buffer
Focus Map - No Sites
Focus Map - Sites
Power Line
National Priority List Sites
Areas of Concern
Dept. Defense Sites
Indian Reservations BIA

0 1/8 1/4 Miles

SITE NAME: Rexford ADDRESS: State Route 65 CITY/STATE: California Hot Sprin CA ZIP: 93207	CLIENT: Technicon Engineering Service CONTACT: Steve Curra INQUIRY #: 5815145.2s DATE: 10/03/19

MAPPED SITES SUMMARY - FOCUS MAP 26

Target Property:
STATE ROUTE 65
CALIFORNIA HOT SPRIN, CA 93207

MAP ID / FOCUS MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

1 **CHMIRS** **S100275589**
Target Property **AVE 80 / RD 272**
TERRA BELLA, CA 93270 **N/A**

Actual:
622 ft.

Focus Map:
10

CHMIRS:

Name:	Not reported
Address:	AVE 80 / RD 272
City,State,Zip:	TERRA BELLA, CA 93270
OES Incident Number:	000891
OES notification:	Not reported
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**20-MAR-90**
Property Use:	650
Agency Id Number:	54708
Agency Incident Number:	9001
Time Notified:	1000
Time Completed:	Not reported
Surrounding Area:	650
Estimated Temperature:	65
Property Management:	C
More Than Two Substances Involved?:	N
Resp Agncy Personel # Of Decontaminated:	0
Responding Agency Personel # Of Injuries:	0
Responding Agency Personel # Of Fatalities:	0
Others Number Of Decontaminated:	0
Others Number Of Injuries:	0
Others Number Of Fatalities:	0
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	JOEL MARTENS
Report Date:	26-MAR-90
Facility Telephone:	209 733-6441
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Not reported
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	88-92
Agency:	Not reported
Incident Date:	27-FEB-90
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Not reported
Site Type:	Not reported
E Date:	29-MAY-90
Substance:	Not reported
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported

(Continued) **S100275589**

Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Not reported

---

2 **M. HURE & SON COLD STORAGE FACILITY** **CPS-SLIC** **S106483677**
RICHGROVE DRIVE & AVENUE 24 **CERS** **N/A**
< 1/8 **EARLIMART, CA 93219**
0.001 mi.
5 ft.

Actual:
502 ft.

Focus Map:
20

CPS-SLIC:

Name:	M. HURE & SON COLD STORAGE FACILITY
Address:	RICHGROVE DRIVE & AVENUE 24
City,State,Zip:	EARLIMART, CA 93219
Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	02/13/2002
Global Id:	SL0610790722
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5F)
Lead Agency Case Number:	Not reported
Latitude:	35.8342
Longitude:	-119.0878
Case Type:	Cleanup Program Site
Case Worker:	JYH
Local Agency:	Not reported
RB Case Number:	SLT5FT108
File Location:	Not reported
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

CERS:

Name:	M. HURE & SON COLD STORAGE FACILITY
Address:	RICHGROVE DRIVE & AVENUE 24
City,State,Zip:	EARLIMART, CA 93219
Site ID:	192798
CERS ID:	SL0610790722
CERS Description:	Cleanup Program Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	JONG HAN - CENTRAL VALLEY RWQCB (REGION 5F)
Entity Title:	Not reported
Affiliation Address:	1685 E. Street
Affiliation City:	Fresno

M. HURE & SON COLD STORAGE FACILITY (Continued) **S106483677**

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

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3 **SPALDING RANCH / S&J RANC** **LUST** **S102859612**
North **AVE 56 & RD 256** **HIST CORTESE** **N/A**
< 1/8 **DUCOR, CA 93218** **CERS**
0.002 mi.
13 ft.

Actual:
623 ft.

Focus Map:
10

LUST REG 5:
Name: SPALDING RANCH / S&J RANCH
Address: AVE 56 & RD 256
City: DUCOR
Region: 5
Status: Case Closed
Case Number: 5T54000421
Case Type: Soil only
Substance: GASOLINE
Staff Initials: DAM
Lead Agency: Regional
Program: LUST
MTBE Code: N/A

HIST CORTESE:
edr_fname: SPALDING RANCH / S&J RANC
edr_fadd1: AVE 56 & RD 256
City,State,Zip: DUCOR, CA 93218
Region: CORTESE
Facility County Code: 54
Reg By: LTNKA
Reg Id: 5T54000421

CERS:
Name: SPALDING RANCH / S&J RANCH
Address: AVE 56 & RD 256
City,State,Zip: DUCOR, CA 93218
Site ID: 208062
CERS ID: T0610700395
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: JOEL MARTENS - TULARE COUNTY
Entity Title: Not reported
Affiliation Address: 5957 So. Mooney Blvd
Affiliation City: Visalia
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 5596247419

4
North
< 1/8
0.022 mi.
117 ft.

RAYMOND S CAMBALIK
248 ROAD AND 60 AVE
DUCOR, CA 93218

HIST UST **U001581210**
N/A

Actual:
593 ft.

Focus Map:
9

HIST UST:

Name:	RAYMOND S CAMBALIK
Address:	248 ROAD AND 60 AVE
City,State,Zip:	DUCOR, CA 93218
File Number:	0002BCF3
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002BCF3.pdf
Region:	STATE
Facility ID:	00000044017
Facility Type:	Other
Other Type:	CITRUS GROVE
Contact Name:	RAY CAMBALIK
Telephone:	8188890474
Owner Name:	RAYMOND S. CAMBALIK
Owner Address:	5856 FAIRVIEW PLACE
Owner City,St,Zip:	AGOURA HILLS, CA 91301
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None
Tank Num:	002
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None
Tank Num:	003
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None
Tank Num:	004
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None

RAYMOND S CAMBALIK (Continued) **U001581210**

Click here for Geo Tracker PDF:

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5 **CED DUCOR SOLAR 1** **AST** **A100418585**
NW **22389 AVENUE 32** **N/A**
< 1/8 **DUCOR, CA 93218**
0.029 mi.
155 ft.

Actual:
511 ft.

Focus Map:
17

AST:

Name:	CED DUCOR SOLAR 1
Address:	22389 AVENUE 32
City/Zip:	DUCOR,93218
Certified Unified Program Agencies:	Not reported
Owner:	Robert Deobler
Total Gallons:	Not reported
CERSID:	10664518
Facility ID:	Not reported
Business Name:	Ced Ducor Solar 1
Phone:	303-265-8835
Fax:	Not reported
Mailing Address:	22389 Ave. 32
Mailing Address City:	Ducor
Mailing Address State:	CA
Mailing Address Zip Code:	93218
Operator Name:	Jeremy Belanger
Operator Phone:	303-378-8922
Owner Phone:	914-286-7000
Owner Mail Address:	100 Summit Lake Drive
Owner State:	NY
Owner Zip Code:	10545
Owner Country:	United States
Property Owner Name:	Donald R. Hardaway/ Mattie Hardaway
Property Owner Phone:	Not reported
Property Owner Mailing Address:	P.O. Box 83
Property Owner City:	Ducor
Property Owner Stat :	CA
Property Owner Zip Code:	93218
Property Owner Country:	United States
EPAID:	CAL000413855

---

6 **SUN PACIFIC FARMING COOP INC** **CERS HAZ WASTE** **S120052401**
SSW **5861 RD 224** **CERS TANKS** **N/A**
< 1/8 **DUCOR, CA 93218** **CUPA Listings**
0.035 mi. **CERS**
184 ft.

Actual:
510 ft.

Focus Map:
7

CERS HAZ WASTE:

Name:	SUN PACIFIC FARMING COOP INC
Address:	5861 RD 224
City,State,Zip:	DUCOR, CA 93218
Site ID:	175269
CERS ID:	10605280
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	SUN PACIFIC FARMING COOP INC

SUN PACIFIC FARMING COOP INC (Continued) **S120052401**

Address: 5861 RD 224
City,State,Zip: DUCOR, CA 93218
Site ID: 175269
CERS ID: 10605280
CERS Description: Aboveground Petroleum Storage

CUPA TULARE:
Name: SUN PACIFIC FARMING COOP INC
Address: 5861 RD 224
City,State,Zip: DUCOR, CA 93218
CERS ID: 10605280
Facility ID: FA1349346
APN: 321-140-019
Latitude: 35.898508909
Longitude: -119.07186305
PE: 2224
TB Fin Fees Description: HM - LARGE FACILITY - > 5 CHEMICALS
Current Status: 1
CD Fin billing Status Description: Active, billable

Name: SUN PACIFIC FARMING COOP INC
Address: 5861 RD 224
City,State,Zip: DUCOR, CA 93218
CERS ID: 10605280
Facility ID: FA1349346
APN: 321-140-019
Latitude: 35.898508909
Longitude: -119.07186305
PE: 2254
TB Fin Fees Description: HW - SMALL GENERATOR
Current Status: 1
CD Fin billing Status Description: Active, billable

Name: SUN PACIFIC FARMING COOP INC
Address: 5861 RD 224
City,State,Zip: DUCOR, CA 93218
CERS ID: 10605280
Facility ID: FA1349346
APN: 321-140-019
Latitude: 35.898508909
Longitude: -119.07186305
PE: 2312
TB Fin Fees Description: EXEMPT TANK FA - STORAGE<20,000
Current Status: 1
CD Fin billing Status Description: Active, billable

CERS:
Name: SUN PACIFIC FARMING COOP INC
Address: 5861 RD 224
City,State,Zip: DUCOR, CA 93218
Site ID: 175269
CERS ID: 10605280
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 175269
Site Name: SUN PACIFIC FARMING COOP INC

SUN PACIFIC FARMING COOP INC (Continued) **S120052401**

Violation Date: 01-11-2017
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 01/18/2017. MISSING 1000 GALLON RED DIESEL CONTAINER INSIDE SECONDARY CONTAINMENT
Violation Division: Tulare County Environmental Health
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-11-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Tulare County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-11-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Tulare County Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-11-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Tulare County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-22-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Tulare County Environmental Health
Eval Program: APSA
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-22-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Tulare County Environmental Health
Eval Program: HMRRP
Eval Source: CERS

SUN PACIFIC FARMING COOP INC (Continued) **S120052401**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-22-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Tulare County Environmental Health
Eval Program: HW
Eval Source: CERS

Enforcement Action:
Site ID: 175269
Site Name: SUN PACIFIC FARMING COOP INC
Site Address: 5861 RD 224
Site City: DUCOR
Site Zip: 93218
Enf Action Date: 01-11-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Tulare County Environmental Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: Tulare County Environmental Health
Entity Title: Not reported
Affiliation Address: 5957 South Mooney Boulevard
Affiliation City: Visalia
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93277
Affiliation Phone: (559) 624-7400

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 33374 LERDO HWY
Affiliation City: BAKERSFIELD
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93308
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: SUN PACIFIC FARMING COOP INC
Entity Title: Not reported
Affiliation Address: 33374 LERDO HWY
Affiliation City: BAKERSFIELD
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 93308
Affiliation Phone: (661) 391-8313

Affiliation Type Desc: Parent Corporation
Entity Name: SUN PACIFIC FARMING COOP INC

SUN PACIFIC FARMING COOP INC (Continued) **S120052401**

Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Environmental Contact
Entity Name: EMILY YBARRA
Entity Title: Not reported
Affiliation Address: 33374 LERDO HWY
Affiliation City: BAKERSFIELD
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 93308
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: VINCENT L BIANCO
Entity Title: MANAGER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Sun Pacific Farming
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (661) 391-8313

Affiliation Type Desc: Document Preparer
Entity Name: EMILY YBARRA
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

7
West
< 1/8
0.102 mi.
540 ft.

HARRISON
22426 AVE 68
DUCOR, CA 93218

HIST UST **U001581203**
N/A

Actual:
508 ft.

Focus Map:
3

HIST UST:

Name:	HARRISON
Address:	22426 AVE 68
City,State,Zip:	DUCOR, CA 93218
File Number:	00023986
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00023986.pdf
Region:	STATE
Facility ID:	00000041787
Facility Type:	Other
Other Type:	FARM
Contact Name:	OSCAR C. PERRY FARM MGMT.
Telephone:	2095342448
Owner Name:	EDITH D HARRISON
Owner Address:	173 GARNET AVE
Owner City,St,Zip:	SAN CARLOS, CA 94070
Total Tanks:	0002
Tank Num:	001
Container Num:	1
Year Installed:	1967
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None
Tank Num:	002
Container Num:	2
Year Installed:	1967
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	None

Click here for Geo Tracker PDF:

8
WNW
1/8-1/4
0.159 mi.
837 ft.

SCE - VESTAL SUBSTATION
RICHGROVE DR
RICHGROVE, CA 93215

CUPA Listings **S120052272**
N/A

Actual:
486 ft.

Focus Map:
20

CUPA TULARE:

Name:	SCE - VESTAL SUBSTATION
Address:	RICHGROVE DR
City,State,Zip:	RICHGROVE, CA 93215
CERS ID:	10155607
Facility ID:	FA1347689
APN:	339-070-019
Latitude:	35.840619562
Longitude:	-119.08690922
PE:	2223
TB Fin Fees Description:	HM - SMALL FACILITY - < 5 CHEMICALS

SCE - VESTAL SUBSTATION (Continued) **S120052272**

Current Status: 1
CD Fin billing Status Description: Active, billable

A9 **SPALDING RANCH / S&J RANCH** **LUST** **S110655826**
North **AVE 56 & RD 256** **N/A**
1/8-1/4 **DUCOR, CA 93218**
0.216 mi.
1142 ft. **Site 1 of 2 in cluster A**

Actual:
488 ft.

Focus Map:
6

LUST:
Name: SPALDING RANCH / S&J RANCH
Address: AVE 56 & RD 256
City,State,Zip: DUCOR, CA 93218
Lead Agency: CENTRAL VALLEY RWQCB (REGION 5F)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0610700395
Global Id: T0610700395
Latitude: 35.9021531
Longitude: -119.0868367
Status: Completed - Case Closed
Status Date: 01/16/2001
Case Worker: Not reported
RB Case Number: 5T54000421
Local Agency: TULARE COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0610700395
Contact Type: Local Agency Caseworker
Contact Name: JOEL MARTENS
Organization Name: TULARE COUNTY
Address: 5957 So. Mooney Blvd
City: Visalia
Email: jmartens@tularehhsa.org
Phone Number: 5596247419

LUST:
Global Id: T0610700395
Action Type: Other
Date: 07/31/1997
Action: Leak Discovery

Global Id: T0610700395
Action Type: Other
Date: 07/31/1997
Action: Leak Stopped

Global Id: T0610700395
Action Type: Other
Date: 09/10/1997
Action: Leak Reported

LUST:

SPALDING RANCH / S&J RANCH (Continued) **S110655826**

Global Id: T0610700395
Status: Open - Case Begin Date
Status Date: 07/31/1997

Global Id: T0610700395
Status: Open - Verification Monitoring
Status Date: 09/14/1999

Global Id: T0610700395
Status: Completed - Case Closed
Status Date: 01/16/2001

A10 **VISTA VERDE RANCH** **LUST** **S110655823**
North **AVENUE 2 EAST OF HWY 65** **N/A**
1/8-1/4 **RICHGROVE, CA 93218**
0.216 mi.
1142 ft. **Site 2 of 2 in cluster A**

Actual:
488 ft.

Focus Map:
6

LUST:
Name: VISTA VERDE RANCH
Address: AVENUE 2 EAST OF HWY 65
City,State,Zip: RICHGROVE, CA 93218
Lead Agency: CENTRAL VALLEY RWQCB (REGION 5F)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0610700378
Global Id: T0610700378
Latitude: 35.9021531
Longitude: -119.0868367
Status: Completed - Case Closed
Status Date: 06/16/2000
Case Worker: Not reported
RB Case Number: 5T54000404
Local Agency: TULARE COUNTY
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0610700378
Contact Type: Local Agency Caseworker
Contact Name: JOEL MARTENS
Organization Name: TULARE COUNTY
Address: 5957 So. Mooney Blvd
City: Visalia
Email: jmartens@tularehhsa.org
Phone Number: 5596247419

LUST:
Global Id: T0610700378
Action Type: ENFORCEMENT
Date: 06/16/2000
Action: Closure/No Further Action Letter

Global Id: T0610700378
Action Type: Other

VISTA VERDE RANCH (Continued) **S110655823**

Date: 03/27/1997
Action: Leak Discovery

Global Id: T0610700378
Action Type: Other
Date: 03/27/1997
Action: Leak Stopped

Global Id: T0610700378
Action Type: Other
Date: 04/21/1997
Action: Leak Reported

LUST:
Global Id: T0610700378
Status: Open - Case Begin Date
Status Date: 03/27/1997

Global Id: T0610700378
Status: Completed - Case Closed
Status Date: 06/16/2000

11
West
1/4-1/2
0.414 mi.
2186 ft.

DUCOR ELEMENTARY
23761 AVE 56
DUCOR, CA 93218

LUST **S105023530**
HIST CORTESE **N/A**
CERS

Actual:
552 ft.

Focus Map:
8

LUST REG 5:
Name: DUCOR ELEMENTARY
Address: 23761 AVE 56
City: DUCOR
Region: 5
Status: Case Closed
Case Number: 5T54000030
Case Type: Soil only
Substance: GASOLINE
Staff Initials: DAM
Lead Agency: Local
Program: LUST
MTBE Code: N/A

LUST:
Name: DUCOR ELEMENTARY
Address: 23761 AVE 56
City,State,Zip: DUCOR, CA 93218
Lead Agency: TULARE COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0610700031
Global Id: T0610700031
Latitude: 35.8916173
Longitude: -119.04279
Status: Completed - Case Closed
Status Date: 12/02/1993
Case Worker: UNK
RB Case Number: 5T54000030

DUCOR ELEMENTARY (Continued) **S105023530**

Local Agency: TULARE COUNTY
File Location: Not reported
Local Case Number: 400
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0610700031
Contact Type: Local Agency Caseworker
Contact Name: UNK
Organization Name: TULARE COUNTY
Address: 5957 S. MOONEY BLVD
City: VISALIA
Email: Not reported
Phone Number: Not reported

LUST:
Global Id: T0610700031
Action Type: Other
Date: 05/17/1988
Action: Leak Discovery

Global Id: T0610700031
Action Type: ENFORCEMENT
Date: 06/21/1991
Action: * Historical Enforcement

Global Id: T0610700031
Action Type: ENFORCEMENT
Date: 06/21/1991
Action: Staff Letter

Global Id: T0610700031
Action Type: Other
Date: 10/27/1987
Action: Leak Reported

LUST:
Global Id: T0610700031
Status: Open - Case Begin Date
Status Date: 10/27/1987

Global Id: T0610700031
Status: Open - Site Assessment
Status Date: 10/27/1987

Global Id: T0610700031
Status: Open - Site Assessment
Status Date: 05/17/1988

Global Id: T0610700031
Status: Open - Site Assessment
Status Date: 11/09/1989

Global Id: T0610700031
Status: Open - Site Assessment

DUCOR ELEMENTARY (Continued) **S105023530**

Status Date: 09/28/1992

Global Id: T0610700031
Status: Open - Remediation
Status Date: 10/08/1993

Global Id: T0610700031
Status: Completed - Case Closed
Status Date: 12/02/1993

HIST CORTESE:
edr_fname: DUCOR ELEMENTARY
edr_fadd1: 23761 56
City,State,Zip: DUCOR, CA 93218
Region: CORTESE
Facility County Code: 54
Reg By: LTNKA
Reg Id: 5T54000030

CERS:
Name: DUCOR ELEMENTARY
Address: 23761 AVE 56
City,State,Zip: DUCOR, CA 93218
Site ID: 219337
CERS ID: T0610700031
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: UNK - TULARE COUNTY
Entity Title: Not reported
Affiliation Address: 5957 S. MOONEY BLVD
Affiliation City: VISALIA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

12
SSE
1/4-1/2
0.436 mi.
2301 ft.

Actual:
543 ft.

Focus Map:
8

DUCOR HANDY MARKET **LUST U003788915**
23314 AVE 56 **UST N/A**
DUCOR, CA 93218 **EMI**

LUST REG 5:
Name: A & A SHELL FOOD MART
Address: 23314 AVE 56
City: DUCOR
Region: 5
Status: Pollution Characterization
Case Number: 5T54000520
Case Type: Soil only
Substance: DIESEL
Staff Initials: JDW
Lead Agency: Local

DUCOR HANDY MARKET (Continued) **U003788915**

Program: LUST
MTBE Code: N/A

LUST:
Name: A & A SHELL FOOD MART
Address: 23314 AVE 56
City,State,Zip: DUCOR, CA 93218
Lead Agency: TULARE COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0610760936
Global Id: T0610760936
Latitude: 35.892226943861
Longitude: -119.051574468613
Status: Completed - Case Closed
Status Date: 12/10/2009
Case Worker: DRP
RB Case Number: 5T54000520
Local Agency: TULARE COUNTY
File Location: Local Agency
Local Case Number: 839
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0610760936
Contact Type: Local Agency Caseworker
Contact Name: DONALD R. PAPENHAUSEN
Organization Name: TULARE COUNTY
Address: 5957 S. MOONEY BLVD
City: VISALIA
Email: dpapenha@tularehhsa.org
Phone Number: 5596247420

Global Id: T0610760936
Contact Type: Regional Board Caseworker
Contact Name: JOHN WHITING
Organization Name: CENTRAL VALLEY RWQCB (REGION 5F)
Address: 1685 E STREET
City: FRESNO
Email: john.whiting@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 12/22/2005
Action: File review

Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 09/10/2009
Action: File review

Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 11/03/2009

DUCOR HANDY MARKET (Continued) **U003788915**

Action: LOP Case Closure Summary to RB

Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 10/29/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 12/10/2009
Action: Closure/No Further Action Letter

Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 11/03/2009
Action: LOP Case Closure Summary to RB

Global Id: T0610760936
Action Type: ENFORCEMENT
Date: 09/26/2005
Action: Notice of Responsibility

Global Id: T0610760936
Action Type: Other
Date: 12/01/2000
Action: Leak Discovery

Global Id: T0610760936
Action Type: Other
Date: 08/31/2005
Action: Leak Reported

LUST:
Global Id: T0610760936
Status: Open - Case Begin Date
Status Date: 12/01/2000

Global Id: T0610760936
Status: Open - Site Assessment
Status Date: 08/18/2005

Global Id: T0610760936
Status: Completed - Case Closed
Status Date: 12/10/2009

UST:
Name: DUCOR HANDY MARKET
Address: 23314 AVE 56
City,State,Zip: DUCOR, CA 93218
Facility ID: FA1000763
Permitting Agency: TULARE COUNTY
Latitude: 35.8920879295056
Longitude: -119.051395444458

DUCOR HANDY MARKET (Continued) **U003788915**

EMI:

Name:	DUCOR HANDY MARKET INC
Address:	23314 AVENUE 56
City,State,Zip:	DUCOR, CA 93218
Year:	2012
County Code:	54
Air Basin:	SJV
Facility ID:	1033
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.22470962877
Reactive Organic Gases Tons/Yr:	0.2234895
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	DUCOR HANDY MARKET INC
Address:	23314 AVENUE 56
City,State,Zip:	DUCOR, CA 93218
Year:	2013
County Code:	54
Air Basin:	SJV
Facility ID:	1033
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY UNIFIED APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.2244385
Reactive Organic Gases Tons/Yr:	0.2244385
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	DUCOR HANDY MARKET INC
Address:	23314 AVENUE 56
City,State,Zip:	DUCOR, CA 93218
Year:	2014
County Code:	54
Air Basin:	SJV
Facility ID:	1033
Air District Name:	SJU
SIC Code:	5541
Air District Name:	SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.021936134783
Reactive Organic Gases Tons/Yr:	0.021936134783
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

DUCOR HANDY MARKET (Continued) **U003788915**

SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: DUCOR HANDY MARKET INC
Address: 23314 AVENUE 56
City,State,Zip: DUCOR, CA 93218
Year: 2015
County Code: 54
Air Basin: SJV
Facility ID: 1033
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.22462
Reactive Organic Gases Tons/Yr: 0.22462
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: DUCOR HANDY MARKET INC
Address: 23314 AVENUE 56
City,State,Zip: DUCOR, CA 93218
Year: 2016
County Code: 54
Air Basin: SJV
Facility ID: 1033
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.22298
Reactive Organic Gases Tons/Yr: 0.22298
Carbon Monoxide Emissions Tons/Yr: Not reported
NOX - Oxides of Nitrogen Tons/Yr: Not reported
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr: Not reported

Name: DUCOR HANDY MARKET INC
Address: 23314 AVENUE 56
City,State,Zip: DUCOR, CA 93218
Year: 2017
County Code: 54
Air Basin: SJV
Facility ID: 1033
Air District Name: SJU
SIC Code: 5541
Air District Name: SAN JOAQUIN VALLEY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.244510932

DUCOR HANDY MARKET (Continued) **U003788915**

Reactive Organic Gases Tons/Yr:	0.244510932
Carbon Monoxide Emissions Tons/Yr:	Not reported
NOX - Oxides of Nitrogen Tons/Yr:	Not reported
SOX - Oxides of Sulphur Tons/Yr:	Not reported
Particulate Matter Tons/Yr:	Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr:	Not reported

Count: 43 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ALLENSWORTH	S107540047		ON ROAD 80, 3 MILES SOUTH OF AVENUE 24	93219	CDL
DELANO	S107540355		ROAD 192, 1/2 MILE S OF AVENUE 24	93215	CDL
DELANO	S101619991	DEID OFFICE & YARD	AVENUE 24	93215	SWEEPS UST, CA FID UST
DELANO	2008435216	STATE 99 AND AVE 24	STATE 99 AND AVE 24		HMIRS
DELANO	S105629566		GARAGE NORTH KERN STATE PRISON	93215	CHMIRS
DELANO	S109046633		SOUTHBOUND STATE ROUTE 99 AT CECIL AVE		CHMIRS
DELANO	1024803033	CASTLEROCK COOLING	501 RICHGROVE DR	93215	RCRA NonGen / NLR
DELANO	1024607447	TROPICO SOLAR PV PLANT	23219 AVENUE 24	93215	FINDS
DELANO	1023239488	TULARE 24	SW CORNER AVENUE 24 & ROAD 128	93215	FINDS
DELANO	1024607448	NICOLIS SOLAR PV PLANT	23219 AVENUE 24	93215	FINDS
DELANO	1023218722	BLUE JAY	1/2 MILE NORTH OF AVE 2 AND EAST OF ROAD 224	93215	FINDS
DELANO	1024665171	CASTLEROCK COOLING	501 RICHGROVE DR	93215	FINDS, ECHO
DELANO	S123734976	1X ULTRAMAR INC.	HIGHWAY 99 EXIT AVENUE 24	93215	HAZNET
DELANO	S113167022	ULTRAMAR INC	HWY 99/EXIT AVENUE 24 (N)	93215	HAZNET
DELANO	S123076955	CASTLEROCK COOLING	501 RICHGROVE DR	93215	HAZNET
DUCOR	A100422137	MALLEY FARMS, INC. - DUCOR	6380 AVENUE 64	93218	AST
DUCOR	S107537738		AVENUE 56, OFF HWY 65, FRONTAGE ROAD	93218	CDL
DUCOR	S107526631		1/4 MI SO OF AVENUE 56, ON ROAD 200		CDL
DUCOR	S107537743		AVENUE 64 E OF ROAD 208	93218	CDL
DUCOR	S106925556	DUCOR FIRE STATION	AVENUE 56 & OLD 65	93218	SWEEPS UST
DUCOR	S106925558	DUCOR UNION ELEM SCH	23761 AVENUE 56	93218	SWEEPS UST
DUCOR	S106925914	EVANS GROCERIES	23529529 AVENUE 56	93218	SWEEPS UST
DUCOR	U001581202	HARDAWAY FARM	4201 ROAD 232	93218	HIST UST
DUCOR	U001581197	DUCOR RANCH-ELMCO	5995 ROAD 224	93218	HIST UST
DUCOR	S116779861		23314 AVENUE 56		CHMIRS
DUCOR	1024821621	JUAN'S TIRE SHOP	23301 AVENUE 56	93207	RCRA NonGen / NLR
DUCOR	1024839265	MALLEY FARMS INC	6380 AVENUE 64	93218	RCRA NonGen / NLR
DUCOR	1024684186	JUAN'S TIRE SHOP	23301 AVENUE 56	93207	FINDS, ECHO
DUCOR	1016428098	MALLEY FARMS, INC. - DUCOR	6380 AVENUE 64	93218	FINDS
DUCOR	1024624783	MALLEY FARMS INC	6380 AVENUE 64	93218	FINDS, ECHO
DUCOR	S106247926	A & A SHELL FOOD MART	23314 AVENUE 56	93218	EMI
DUCOR	S118213712	DUCOR HANDY MARKET	23314 AVENUE 56	93218	HAZNET
EARLIMART	S113894363	RB RECYCLING	137-1/2 S STATE ST	93219	SWRCY
EARLIMART	1024809083	FASTRIP OIL COMPANY #919 S A MARKET	855 STATE ST	93219	RCRA NonGen / NLR
EARLIMART	1023365919	M. HURE & SON COLD STORAGE FACILITY	RICHGROVE DRIVE & AVENUE 24	93219	FINDS
EARLIMART	1024667100	FASTRIP OIL COMPANY #919 S A MARKET	855 STATE ST	93219	FINDS, ECHO
EARLIMART	S113803964	SOUTHERN CALIFORNIA GAS CO L 7000 DELANO RECEIVER	SW CORNER OF ROAD 112 & AVENUE 24	93219	HAZNET
EARLIMART	S113132316	FASTRIP OIL COMPANY #919 S A MARKET	855 STATE ST	93219	HAZNET
RICHGROVE	S106926108	FASTWAY MARKET	H188 RICHGROVE DR	93215	SWEEPS UST
TERRA BELLA	S107526956		10538 ROAD 224, RODEO ARENA		CDL
TERRA BELLA	S118411784	JOHN LILICROP	ROAD 244 AND AVE 74	93270	HIST UST
TERRA BELLA	U001582896	JOHN LILICROP	ROAD 244 & AVE. 74	93270	HIST UST

Count: 43 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
TULARE COUNTY	S107540477		ROAD 224 OFF OF HIGHWAY 198		CDL

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/03/2019
Next Scheduled EDR Contact: 10/14/2019
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Quarterly

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/13/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 14

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent NPL

CA RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

CA ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

CA SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/13/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/13/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

CA LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

CA LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

CA LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

CA LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

CA LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

CA LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

CA LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 55

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

CA LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

CA LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

CA LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

CA CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 55

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

CA SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

CA SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

CA SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

CA SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

CA SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

CA SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

CA SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

CA SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

CA SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 08/26/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

State and tribal registered storage tank lists

CA MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 42

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Semi-Annually

CA UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 41

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/12/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R1: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 03/02/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 36

Source: N/A
Telephone: N/A
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

CA VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

CA BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 57

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

CA WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: No Update Planned

CA SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 64

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 08/02/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

CA HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

CA SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

CA CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Varies

CA CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

CA TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Quarterly

CA PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/28/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 26

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

CA SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/04/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Annually

CA HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 09/11/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/11/2018
Number of Days to Update: 29

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

Local Land Records

CA LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/05/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/09/2019
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/30/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

CA DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Semi-Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

Records of Emergency Release Reports

CA CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 58

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Semi-Annually

CA LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 55

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 79

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/23/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/16/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/09/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/23/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 106

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 09/05/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 18
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2019
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 34
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 07/03/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/20/2019
Date Data Arrived at EDR: 06/20/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 49
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/06/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/03/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/09/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/01/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 04/01/2019
Date Data Arrived at EDR: 04/30/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 100

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/10/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/30/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem

Date of Government Version: 10/27/2009
Date Data Arrived at EDR: 11/10/2009
Date Made Active in Reports: 12/08/2009
Number of Days to Update: 28

Source: N/A
Telephone: N/A
Last EDR Contact: 11/12/1996
Next Scheduled EDR Contact: N/A
Data Release Frequency: Annually

US AIRS MINOR: Aerometric Information Retrieval System Facility Subsystem

Date of Government Version: 10/27/2009
Date Data Arrived at EDR: 11/10/2009
Date Made Active in Reports: 12/08/2009
Number of Days to Update: 28

Source: N/A
Telephone: N/A
Last EDR Contact: 11/12/1996
Next Scheduled EDR Contact: N/A
Data Release Frequency: Annually

US MINES: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/30/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

US MINES 2: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/30/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/30/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/27/2019
Date Data Arrived at EDR: 03/28/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 34

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/10/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/03/2019
Date Data Arrived at EDR: 06/05/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 90

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 07/06/2019
Date Data Arrived at EDR: 07/09/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 79

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Quarterly

Other Ascertainable Records

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 57

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/24/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

CA CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 04/18/2019
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 11

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

CA CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/15/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

CA DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 55

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Annually

CA DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/19/2019
Date Data Arrived at EDR: 03/22/2019
Date Made Active in Reports: 04/09/2019
Number of Days to Update: 18

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

CA DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

CA EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/18/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Varies

CA ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/22/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 66

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/18/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

CA Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

CA Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 05/16/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 63

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Varies

CA HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 54

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Annually

CA ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Quarterly

CA HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Quarterly

CA HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/09/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 73

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/09/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Quarterly

CA MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 65

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/17/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/09/2019
Number of Days to Update: 66

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

CA NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/13/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/13/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Quarterly

CA PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/09/2019
Number of Days to Update: 66

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

CA PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 64

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/17/2019
Date Data Arrived at EDR: 06/18/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 65

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: No Update Planned

CA UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 08/20/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/21/2019
Data Release Frequency: Varies

CA WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: No Update Planned

CA WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: No Update Planned

CA MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 64

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

CA CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

CA CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 7

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

CA NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

CA WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/11/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Varies

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

CA RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

CA RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 06/20/2019
Number of Days to Update: 70

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 26

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 27

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/23/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 05/17/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/22/2019
Date Data Arrived at EDR: 05/23/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 56

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
Cupa Facility list

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 29

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 06/05/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 47

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/11/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/10/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 72

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/19/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 05/06/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 70

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/16/2019
Date Data Arrived at EDR: 05/17/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 13

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/30/2019
Date Data Arrived at EDR: 05/31/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 53

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

LASSEN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
Cupa facility list

Date of Government Version: 07/22/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

LOS ANGELES COUNTY:

Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 09/12/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/09/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/15/2019
Date Data Arrived at EDR: 07/17/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 71

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/17/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/27/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: No Update Planned

Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/27/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2019
Next Scheduled EDR Contact: 10/07/2019
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/15/2019
Date Data Arrived at EDR: 07/17/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 19

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/12/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: No Update Planned

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/28/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 67

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 53

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 05/23/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 53

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/25/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 62

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 09/30/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 07/23/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/09/2019
Date Made Active in Reports: 05/30/2019
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/02/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/12/2019
Number of Days to Update: 69

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 74

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/16/2019
Next Scheduled EDR Contact: 12/30/2019
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/06/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 55

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/01/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/06/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 09/13/2019
Number of Days to Update: 77

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/01/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/16/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/31/2019
Date Data Arrived at EDR: 05/31/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 52

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: No Update Planned

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/11/2019
Next Scheduled EDR Contact: 12/29/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 08/06/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 08/15/2019
Number of Days to Update: 1

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 05/16/2019
Date Data Arrived at EDR: 05/23/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 56

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/21/2019
Next Scheduled EDR Contact: 12/09/2019
Data Release Frequency: No Update Planned

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/19/2019
Date Data Arrived at EDR: 05/23/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 60
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 47
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 06/18/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 29

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 10/02/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/02/2019
Date Data Arrived at EDR: 07/02/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 80

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/19/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 07/18/2019
Date Data Arrived at EDR: 07/18/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/15/2019
Next Scheduled EDR Contact: 10/28/2019
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 49

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 08/28/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List
Cupa facilities

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/19/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 05/09/2019
Date Data Arrived at EDR: 05/10/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 68

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: No Update Planned

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: No Update Planned

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 06/10/2019
Date Data Arrived at EDR: 06/12/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 42

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 12/23/2019
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/26/2019
Date Data Arrived at EDR: 06/28/2019
Date Made Active in Reports: 07/31/2019
Number of Days to Update: 33

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 05/03/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 70

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

STREET AND ADDRESS INFORMATION

Rexford Solar Farm Add-On - Trueblood Parcels
Not Reported
California Hot Springs, CA 93207

Inquiry Number: 5933040.2s
January 13, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NOT REPORTED
CALIFORNIA HOT SPRINGS, CA 93207

COORDINATES

Latitude (North):	35.8879500 - 35° 53' 16.62''
Longitude (West):	118.9867170 - 118° 59' 12.18''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	320673.4
UTM Y (Meters):	3973143.5
Elevation:	662 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5638950 FOUNTAIN SPRINGS, CA
Version Date:	2012
Southeast Map:	5639202 QUINCY SCHOOL, CA
Version Date:	2012
Southwest Map:	5639096 RICHGROVE, CA
Version Date:	2012
Northwest Map:	5639475 DUCOR, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140617
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NOT REPORTED
CALIFORNIA HOT SPRINGS, CA 93207

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR..... EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties
INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
CERS HAZ WASTE ---------- CERS HAZ WASTE
US CDL ---------- National Clandestine Laboratory Register
PFAS ---------- PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST ---------- SWEEPS UST Listing
HIST UST ---------- Hazardous Substance Storage Container Database
CERS TANKS ---------- California Environmental Reporting System (CERS) Tanks
CA FID UST ---------- Facility Inventory Database

Local Land Records

LIENS ---------- Environmental Liens Listing
LIENS 2 ---------- CERCLA Lien Information
DEED ---------- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
CHMIRS ---------- California Hazardous Material Incident Report System
LDS ---------- Land Disposal Sites Listing
MCS ---------- Military Cleanup Sites Listing

Other Ascertainable Records

RCRA NonGen / NLR ---------- RCRA - Non Generators / No Longer Regulated
FUDS ---------- Formerly Used Defense Sites
DOD ---------- Department of Defense Sites
SCRD DRYCLEANERS ---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---------- Financial Assurance Information
EPA WATCH LIST ---------- EPA WATCH LIST
2020 COR ACTION ---------- 2020 Corrective Action Program List
TSCA ---------- Toxic Substances Control Act
TRIS ---------- Toxic Chemical Release Inventory System
SSTS ---------- Section 7 Tracking Systems
ROD ---------- Records Of Decision
RMP ---------- Risk Management Plans
RAATS ---------- RCRA Administrative Action Tracking System
PRP ---------- Potentially Responsible Parties
PADS ---------- PCB Activity Database System
ICIS ---------- Integrated Compliance Information System
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---------- Material Licensing Tracking System

COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)
MINES MRDS	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

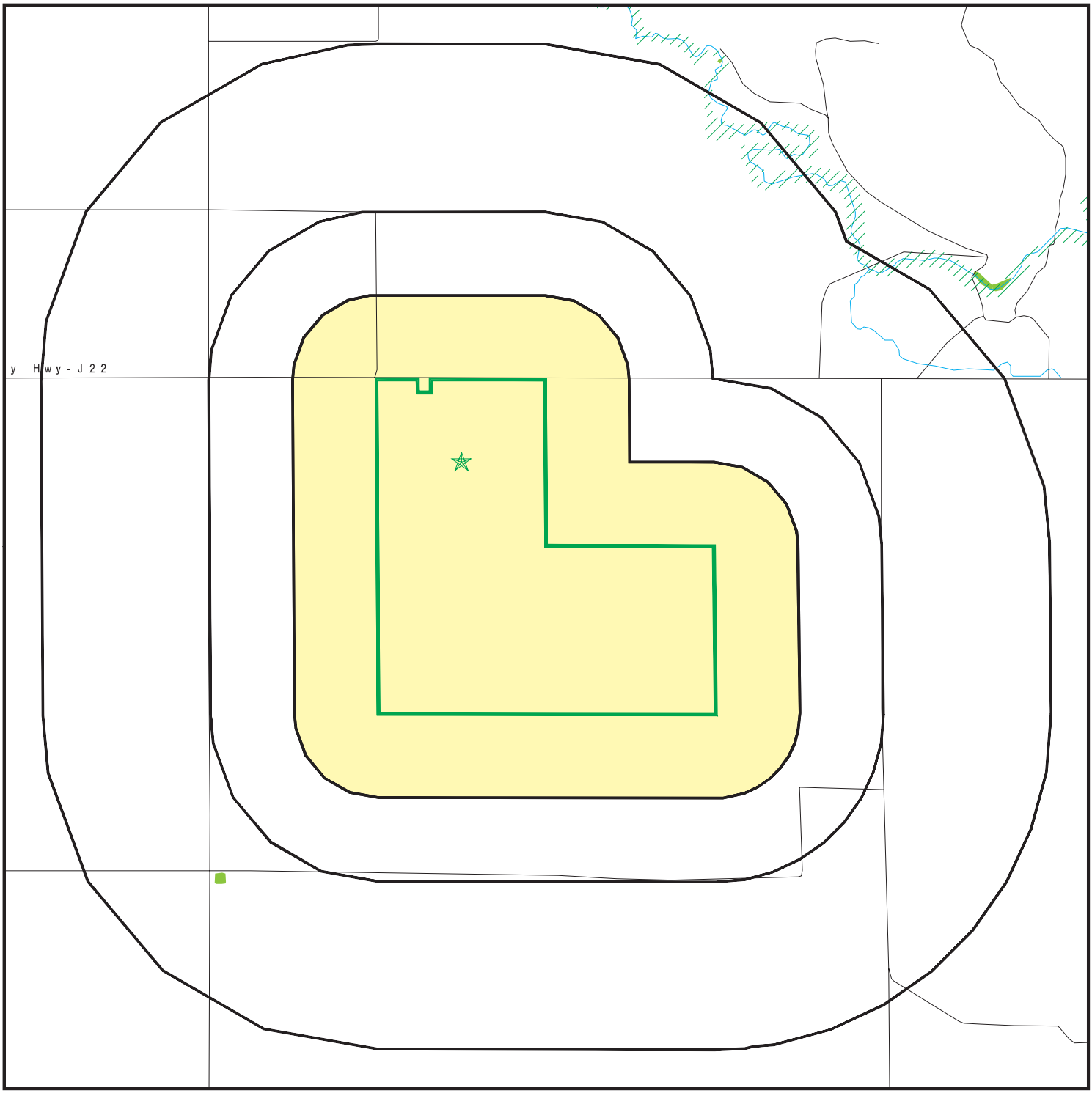
Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 5933040.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

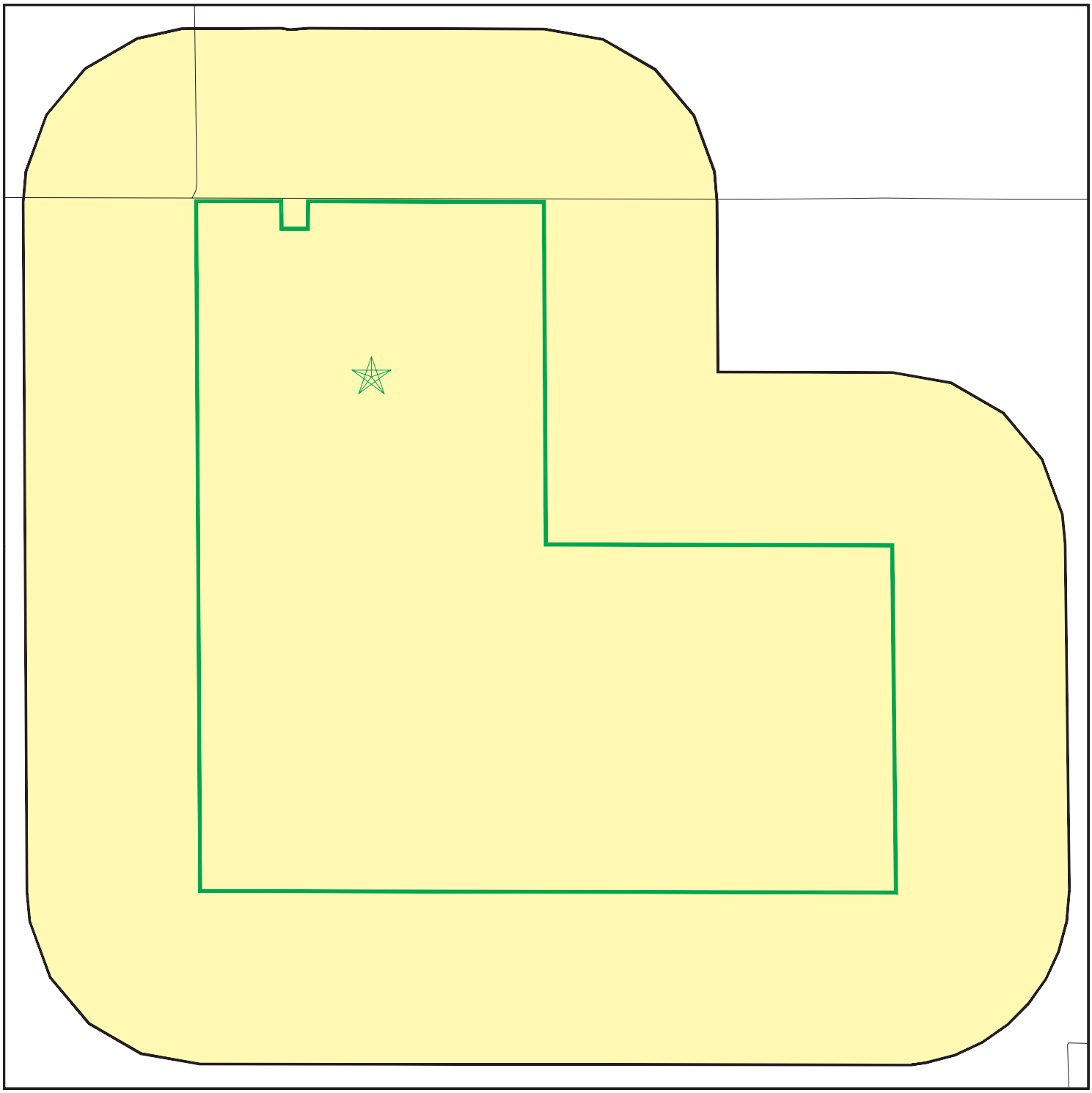
Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Rexford Solar Farm Add-On - Trueblood Parcels ADDRESS: Not Reported California Hot Springs CA 93207 LAT/LONG: 35.88795 / 118.986717	CLIENT: Technicon Engineering Service CONTACT: Jim Vue INQUIRY #: 5933040.2s DATE: January 13, 2020 1:14 pm

DETAIL MAP - 5933040.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/8 1/4 1/2 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Rexford Solar Farm Add-On - Trueblood Parcels	CLIENT: Technicon Engineering Service
ADDRESS: Not Reported California Hot Springs CA 93207	CONTACT: Jim Vue
LAT/LONG: 35.88795 / 118.986717	INQUIRY #: 5933040.2s DATE: January 13, 2020 1:15 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.500		0	0	0	NR	NR	0
RGA LUST	0.500		0	0	0	NR	NR	0
- Totals --		0	0	0	0	0	0	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

NO SITES FOUND

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: EPA
Telephone: N/A
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/13/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 14

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/07/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/07/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/11/2019
Date Data Arrived at EDR: 11/12/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 57

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/12/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/16/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/02/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 20

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/12/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 12/03/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 07/02/2019
Date Data Arrived at EDR: 10/16/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 8

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/16/2020
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 79

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 08/27/2019
Date Data Arrived at EDR: 08/28/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 75
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/07/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/11/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/16/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 79

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/12/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 12/03/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/02/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 20

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 79

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/17/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/07/2020
Number of Days to Update: 70
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/23/2019
Date Data Arrived at EDR: 09/24/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 43
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/03/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/26/2019
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 59

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/01/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/07/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 10/21/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/02/2020
Number of Days to Update: 72

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 10/22/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/11/2019
Number of Days to Update: 70

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 10/21/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 73

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/22/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/29/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2019
Date Data Arrived at EDR: 06/26/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 89

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/06/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/21/2019
Number of Days to Update: 58

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/15/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 79

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/19/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/10/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/09/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/23/2019
Date Data Arrived at EDR: 09/24/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/08/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/20/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 11/16/2018
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 370

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 106
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/23/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13
Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/25/2019
Date Data Arrived at EDR: 05/02/2019
Date Made Active in Reports: 05/23/2019
Number of Days to Update: 21
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/21/2019
Number of Days to Update: 14
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/10/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/20/2019
Date Data Arrived at EDR: 06/20/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 49

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/06/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 12/20/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 85
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2019
Date Data Arrived at EDR: 10/09/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 72

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/07/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/21/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 82

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/15/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 11/20/2019
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 09/17/2019
Date Data Arrived at EDR: 09/18/2019
Date Made Active in Reports: 12/03/2019
Number of Days to Update: 76

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/27/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 76

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 37

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/12/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 12/03/2019
Number of Days to Update: 90

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/10/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 10/06/2019
Date Data Arrived at EDR: 10/08/2019
Date Made Active in Reports: 01/02/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 01/07/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 83

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/23/2019
Date Data Arrived at EDR: 09/24/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 43

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/20/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 10/31/2019
Date Data Arrived at EDR: 11/01/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 40

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/12/2019
Number of Days to Update: 62
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 08/28/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 09/27/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 37
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 03/29/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/22/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 66
Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/30/2019
Next Scheduled EDR Contact: 02/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/02/2020
Number of Days to Update: 72
Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/08/2019
Date Data Arrived at EDR: 11/12/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 57
Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 54

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/09/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 11/19/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/19/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/19/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/07/2019
Date Data Arrived at EDR: 10/08/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 30

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/07/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/11/2019
Date Data Arrived at EDR: 11/12/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 57

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/12/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/16/2019
Date Data Arrived at EDR: 09/18/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 49

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/11/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 11/18/2019
Number of Days to Update: 90

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/07/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/17/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 10/21/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 73

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/22/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/01/2019
Number of Days to Update: 53

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/22/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 10/03/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 34

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 51

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 08/05/2019
Date Data Arrived at EDR: 08/07/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 63

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/03/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/23/2019
Date Made Active in Reports: 10/22/2019
Number of Days to Update: 60

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 43

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/12/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 49

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/08/2019
Date Data Arrived at EDR: 10/10/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 62

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/03/2020
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List

CUPA facility list.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/10/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 72

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 10/30/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List

Cupa facility list.

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/02/2020
Number of Days to Update: 72

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List

Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 11/05/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 64

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 08/16/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/15/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/22/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 12/11/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/26/2019
Date Data Arrived at EDR: 10/04/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 34

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 10/16/2019
Date Made Active in Reports: 12/12/2019
Number of Days to Update: 57

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/16/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/09/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/20/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 10/18/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/20/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/20/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 71
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/09/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/22/2019
Date Data Arrived at EDR: 08/26/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 64
Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 44

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 08/21/2019
Date Data Arrived at EDR: 09/03/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 58

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 11/06/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 62

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/30/2019
Date Data Arrived at EDR: 10/30/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 42

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 08/07/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 63

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/10/2019
Date Data Arrived at EDR: 08/09/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 61

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 11/05/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 64

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/05/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/05/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 61

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 12/13/2019
Number of Days to Update: 52

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 73

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/16/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/06/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 37

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/23/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/07/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 11/08/2019
Number of Days to Update: 38

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/23/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/29/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/04/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 62

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/04/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 10/16/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 12/13/2019
Number of Days to Update: 52

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 67

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 01/07/2020
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/11/2019
Next Scheduled EDR Contact: 03/30/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 12/11/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 09/03/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 11/05/2019
Number of Days to Update: 57

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/05/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/20/2019
Next Scheduled EDR Contact: 03/09/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 10/30/2019
Date Data Arrived at EDR: 11/01/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 68

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/31/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/25/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 08/28/2019
Date Data Arrived at EDR: 08/30/2019
Date Made Active in Reports: 10/29/2019
Number of Days to Update: 60

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 06/18/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 07/24/2019
Number of Days to Update: 29

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 11/07/2019
Number of Days to Update: 36

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/17/2019
Next Scheduled EDR Contact: 04/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 11/04/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 62

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/28/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 08/29/2019
Date Data Arrived at EDR: 09/03/2019
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 64

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 12/02/2019
Next Scheduled EDR Contact: 03/16/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/02/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 08/12/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 64

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 11/04/2019
Next Scheduled EDR Contact: 02/17/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/07/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/26/2019
Date Data Arrived at EDR: 10/23/2019
Date Made Active in Reports: 12/13/2019
Number of Days to Update: 51
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 07/26/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/10/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 09/25/2019
Date Data Arrived at EDR: 10/01/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 30
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/19/2019
Next Scheduled EDR Contact: 04/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 11/04/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 63

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/25/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/14/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 08/05/2019
Number of Days to Update: 83

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/11/2019
Next Scheduled EDR Contact: 02/24/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/06/2020
Next Scheduled EDR Contact: 04/20/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 51

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/29/2019
Next Scheduled EDR Contact: 02/10/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/09/2019
Next Scheduled EDR Contact: 12/07/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/14/2019
Next Scheduled EDR Contact: 03/02/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/18/2019
Next Scheduled EDR Contact: 03/23/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

REXFORD SOLAR FARM ADD-ON - TRUEBLOOD PARCELS
NOT REPORTED
CALIFORNIA HOT SPRINGS, CA 93207

TARGET PROPERTY COORDINATES

Latitude (North):	35.88795 - 35° 53' 16.62''
Longitude (West):	118.986717 - 118° 59' 12.18''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	320673.4
UTM Y (Meters):	3973143.5
Elevation:	662 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5638950 FOUNTAIN SPRINGS, CA
Version Date:	2012
Southeast Map:	5639202 QUINCY SCHOOL, CA
Version Date:	2012
Southwest Map:	5639096 RICHGROVE, CA
Version Date:	2012
Northwest Map:	5639475 DUCOR, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

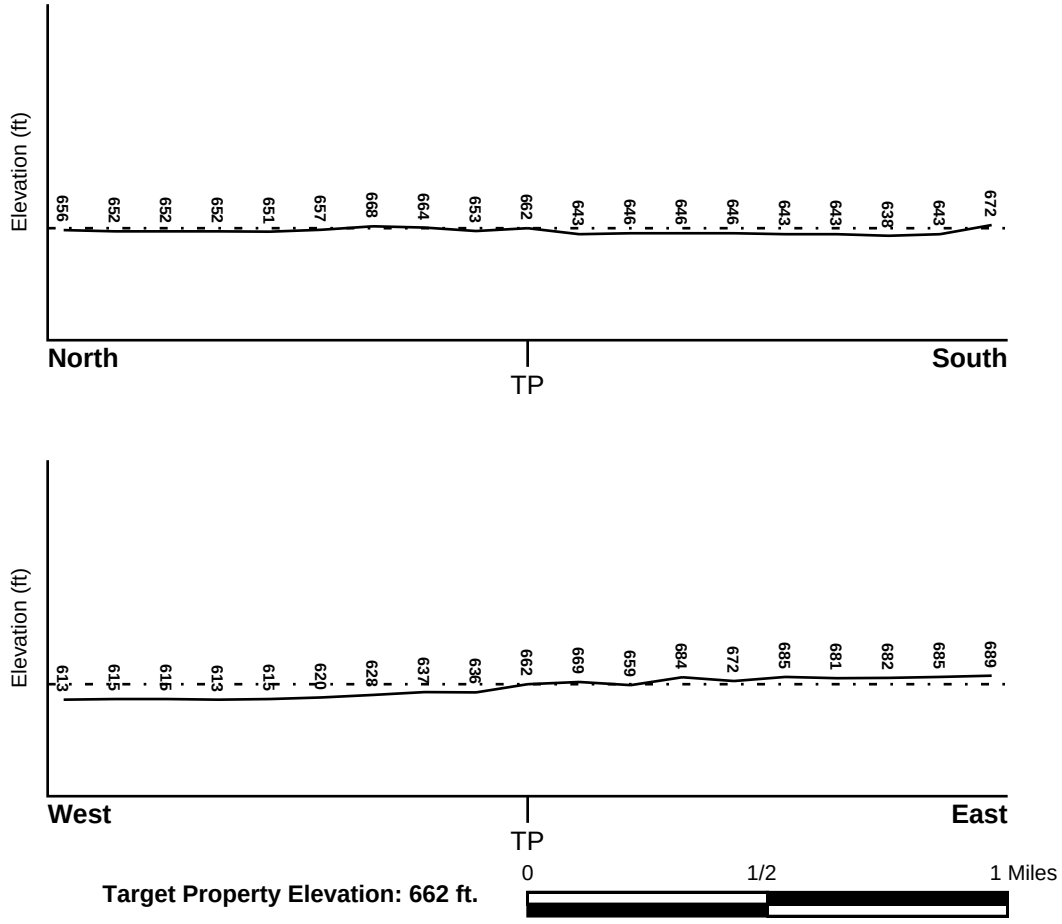
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06107C2000E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06107C1975E	FEMA FIRM Flood data
06107C2350E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
FOUNTAIN SPRINGS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

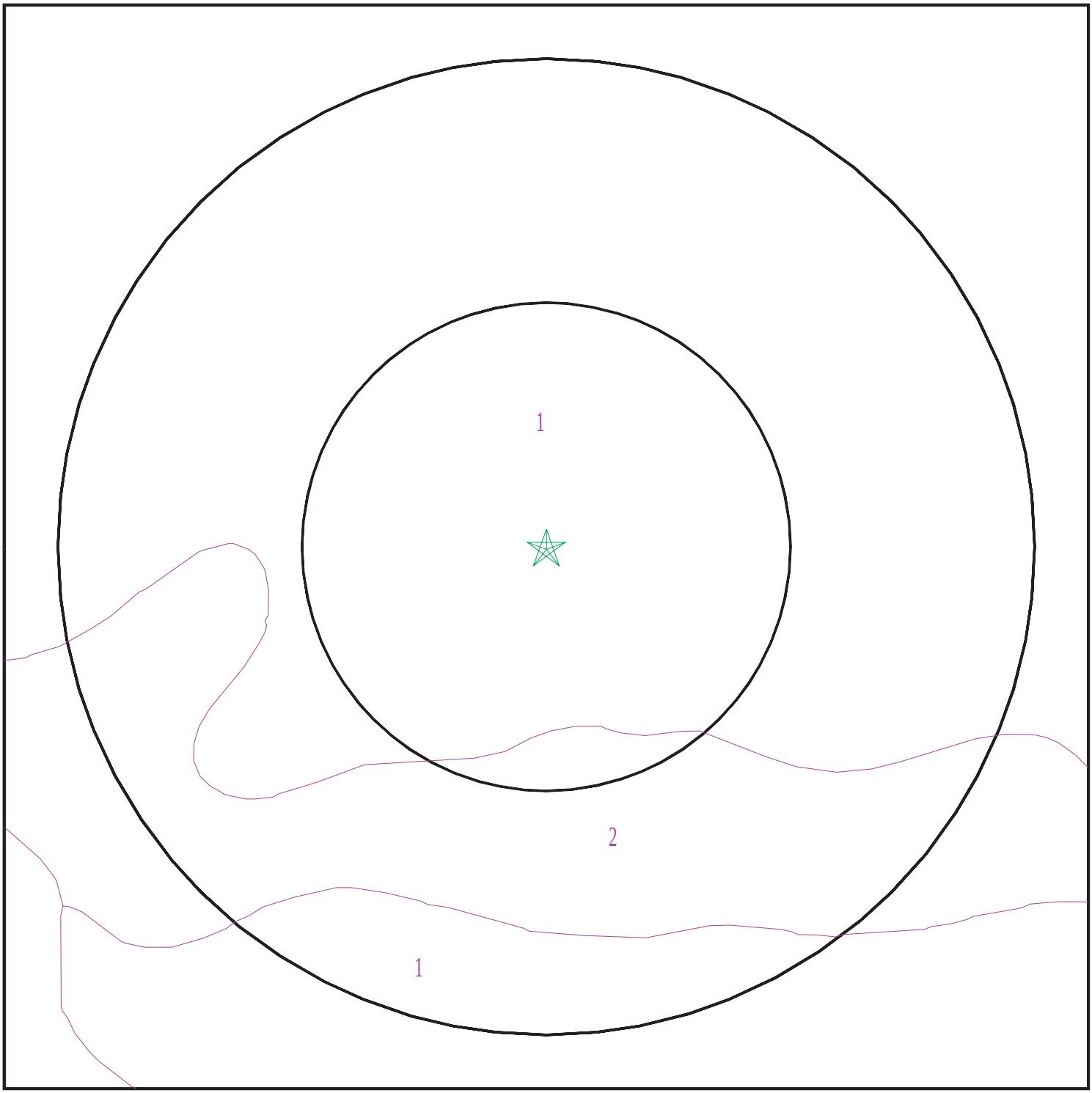
Era:	Cenozoic
System:	Tertiary
Series:	Pliocene
Code:	Tpc *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Continental Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5933040.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Rexford Solar Farm Add-On - Trueblood Parcels	CLIENT:	Technicon Engineering Service
ADDRESS:	Not Reported California Hot Springs CA 93207	CONTACT:	Jim Vue
LAT/LONG:	35.88795 / 118.986717	INQUIRY #:	5933040.2s
		DATE:	January 13, 2020 1:15 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: CENTERVILLE

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	clay	Not reported	Not reported	Max: Min:	Max: Min:
2	18 inches	37 inches	sandy clay	Not reported	Not reported	Max: Min:	Max: Min:
3	37 inches	40 inches		Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: PORTERVILLE

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	31 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6
2	31 inches	72 inches	clay	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000168418	1/4 - 1/2 Mile NW
2	USGS40000168419	1/2 - 1 Mile WNW
3	USGS40000168453	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

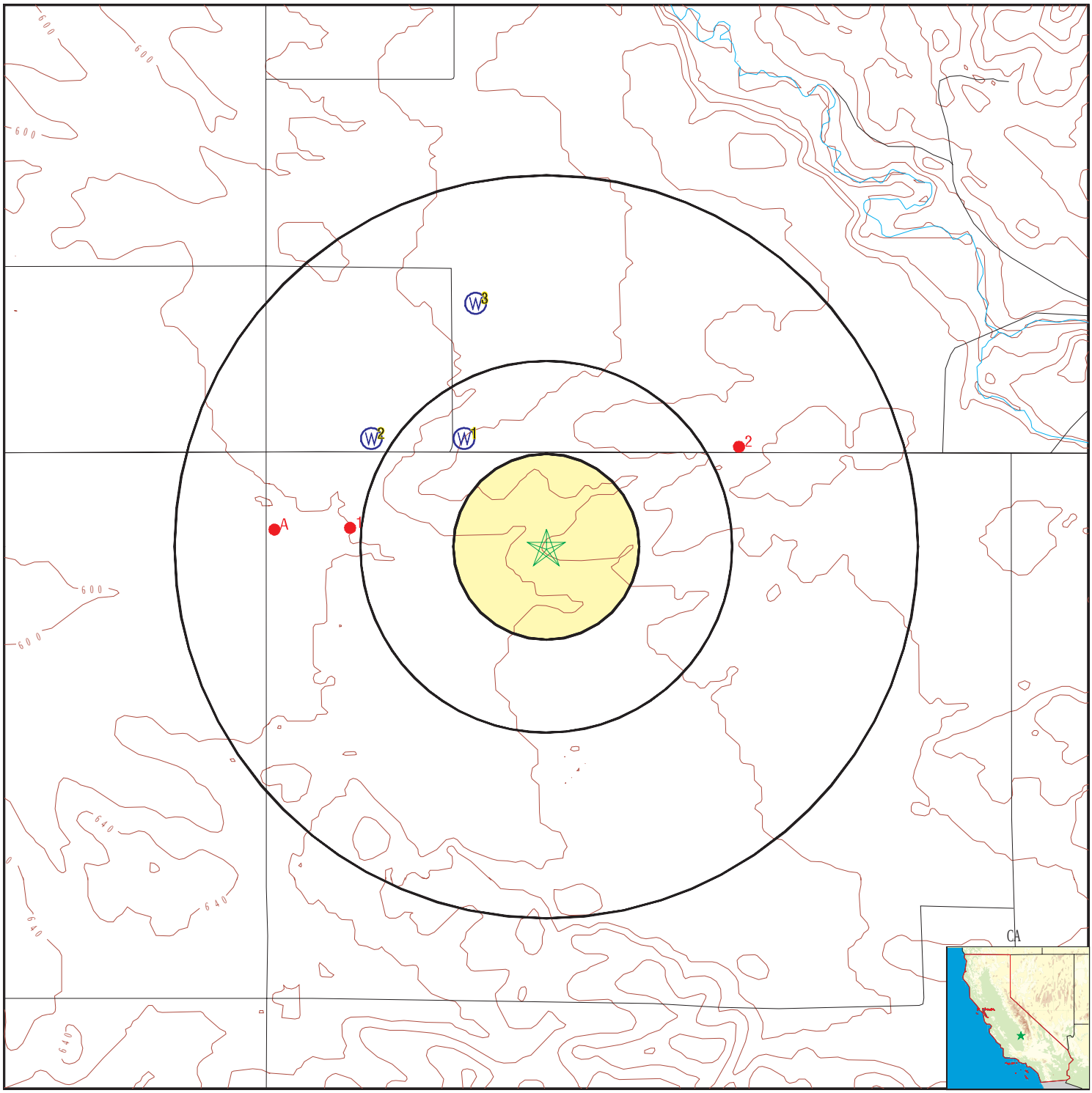
MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG13000004782	1/2 - 1 Mile West
2	CAOG13000004781	1/2 - 1 Mile ENE
A4	CAOG13000001114	1/2 - 1 Mile West
A3	CAOG13000001120	1/2 - 1 Mile West

PHYSICAL SETTING SOURCE MAP - 5933040.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Rexford Solar Farm Add-On - Trueblood Parcels	CLIENT:	Technicon Engineering Service
ADDRESS:	Not Reported California Hot Springs CA 93207	CONTACT:	Jim Vue
		INQUIRY #:	5933040.2s
LAT/LONG:	35.88795 / 118.986717	DATE:	January 13, 2020 1:15 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NW
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000168418**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	023S028E31B001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19590201	Well Depth:	600
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1959-02-01
Feet below surface:	419.00	Feet to sea level:	Not Reported
Note:	Not Reported		

2
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000168419**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	023S028E31C001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	500
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

3
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000168453**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	023S028E30K001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19590219	Well Depth:	780
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Ground water levels,Number of Measurements:	1	Level reading date:	1959-02-19
Feet below surface:	383.10	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
West
1/2 - 1 Mile

OIL_GAS **CAOG13000004782**

API #:	0410700418	Well #:	1
Well Status:	Plugged	Well Type:	DH
Operator Name:	O. H. Griggs & Claude C. Sumter		
Lease Name:	May	Field Name:	Any Field
Area Name:	Any Area	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
SPUD Date:	Not Reported		

2
ENE
1/2 - 1 Mile

OIL_GAS **CAOG13000004781**

API #:	0410700417	Well #:	29-1
Well Status:	Plugged	Well Type:	DH
Operator Name:	Lyle A. Garner	Lease Name:	Dennis
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

A4
West
1/2 - 1 Mile

OIL_GAS **CAOG13000001114**

API #:	0410720278	Well #:	1-31
Well Status:	Plugged	Well Type:	DH
Operator Name:	Spectra Exploration, Inc.	Lease Name:	Grizzle
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	06/01/2013

A3
West
1/2 - 1 Mile

OIL_GAS **CAOG13000001120**

API #:	0403051018	Well #:	1-31
Well Status:	Canceled	Well Type:	OG
Operator Name:	Spectra Exploration, Inc.	Lease Name:	Grizzle
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	Notice of Intent to Drill	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93207	6	2

Federal EPA Radon Zone for TULARE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 93207

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

Rexford Solar Farm Add-On - Trueblood Parcels

Not Reported

California Hot Springs, CA 93207

Inquiry Number: 5933040.5

January 15, 2020

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

01/15/20

Site Name:	Client Name:
Rexford Solar Farm Add-On - T	Technicon Engineering Service
Not Reported	4539 North Brawley Avenue
California Hot Springs, CA 932	Fresno, CA 93722
EDR Inquiry # 5933040.5	Contact: Jim Vue

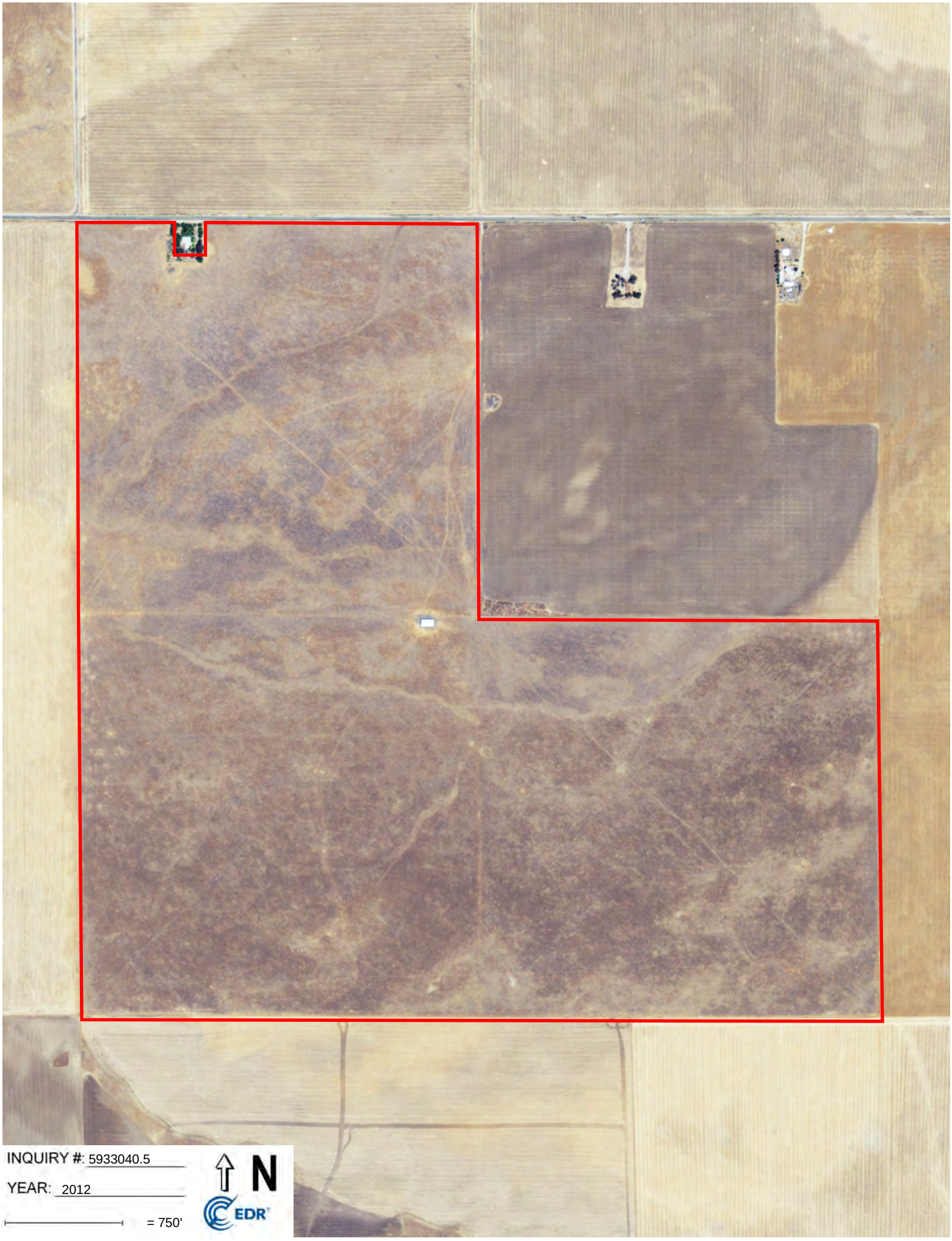
Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=750'	Flight Year: 2016	USDA/NAIP
2012	1"=750'	Flight Year: 2012	USDA/NAIP
2009	1"=750'	Flight Year: 2009	USDA/NAIP
2006	1"=750'	Flight Year: 2006	USDA/NAIP
1994	1"=750'	Acquisition Date: May 29, 1994	USGS/DOQQ
1985	1"=750'	Flight Date: January 01, 1985	USGS
1977	1"=750'	Flight Date: June 02, 1977	USGS
1963	1"=750'	Flight Date: January 01, 1963	USGS
1952	1"=750'	Flight Date: September 27, 1952	USDA
1940	1"=750'	Flight Date: June 10, 1940	USDA
1937	1"=750'	Flight Date: October 12, 1937	USDA

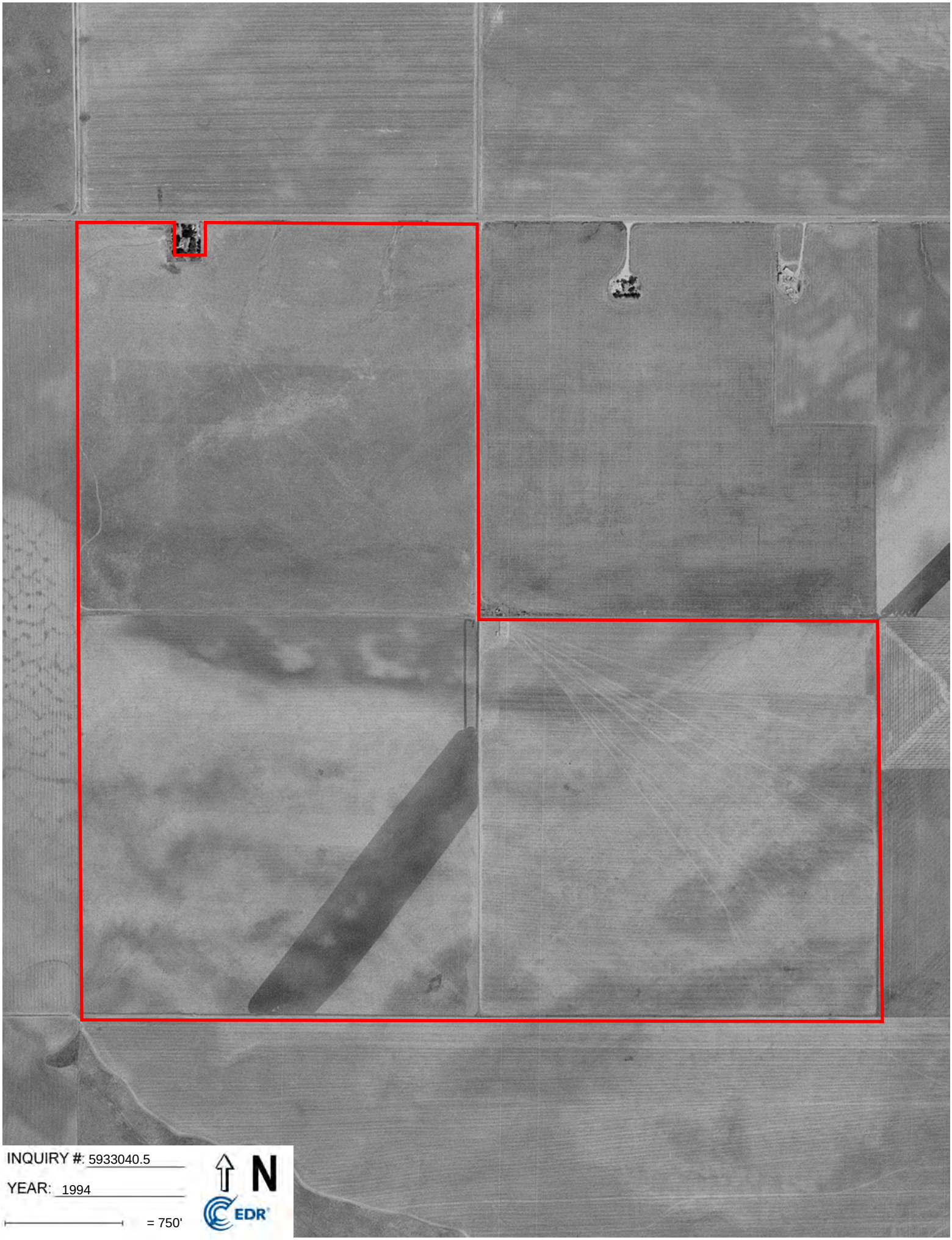
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

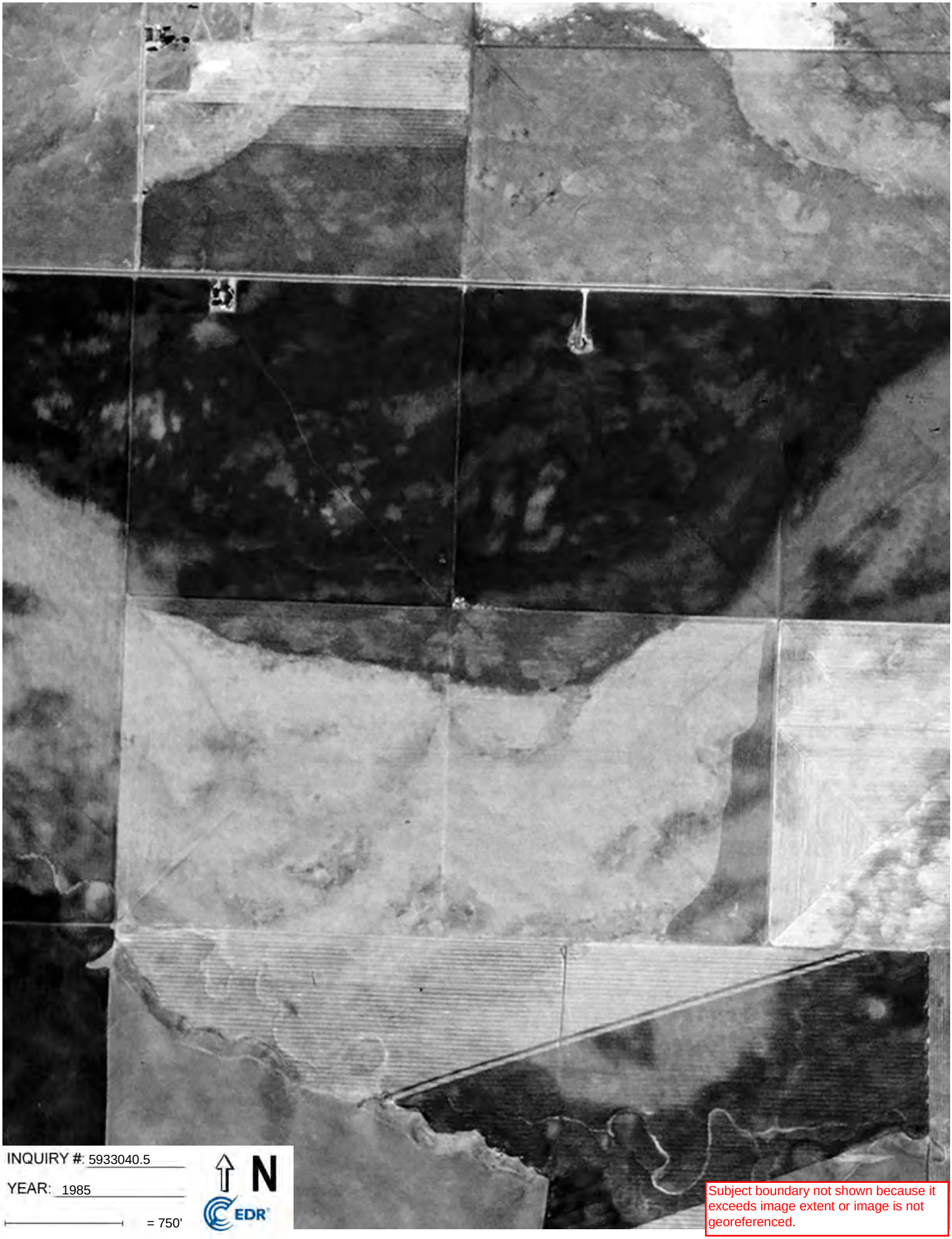

INQUIRY #: 5933040.5
YEAR: 2016
= 750'
N
EDR


INQUIRY #: 5933040.5
YEAR: 2012
= 750'
N
EDR


INQUIRY #: 5933040.5
YEAR: 2009
= 750'
N
EDR


INQUIRY #: 5933040.5
YEAR: 2006
= 750'
N
EDR


INQUIRY #: 5933040.5
YEAR: 1994
= 750'
N
EDR



INQUIRY #: 5933040.5

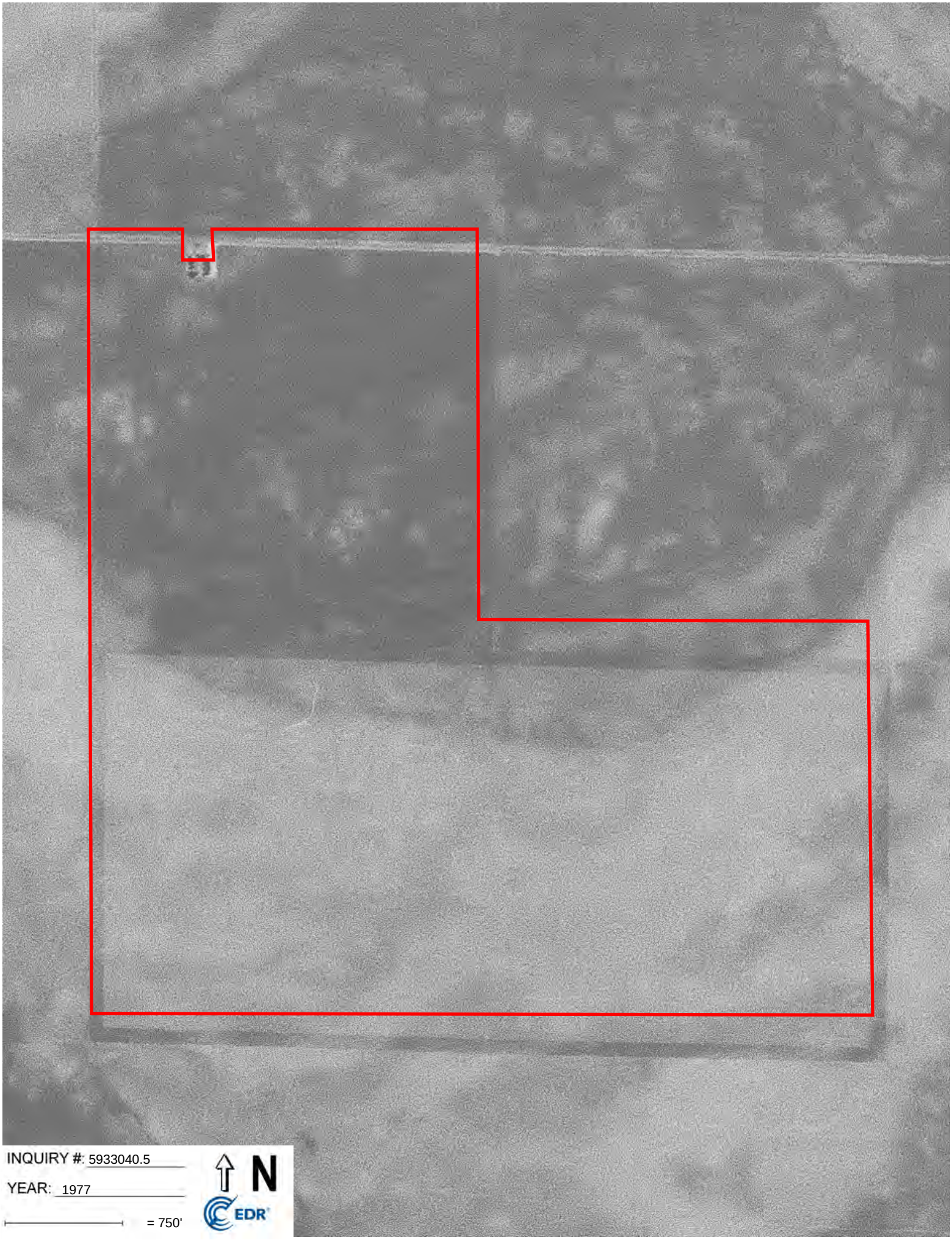
YEAR: 1985

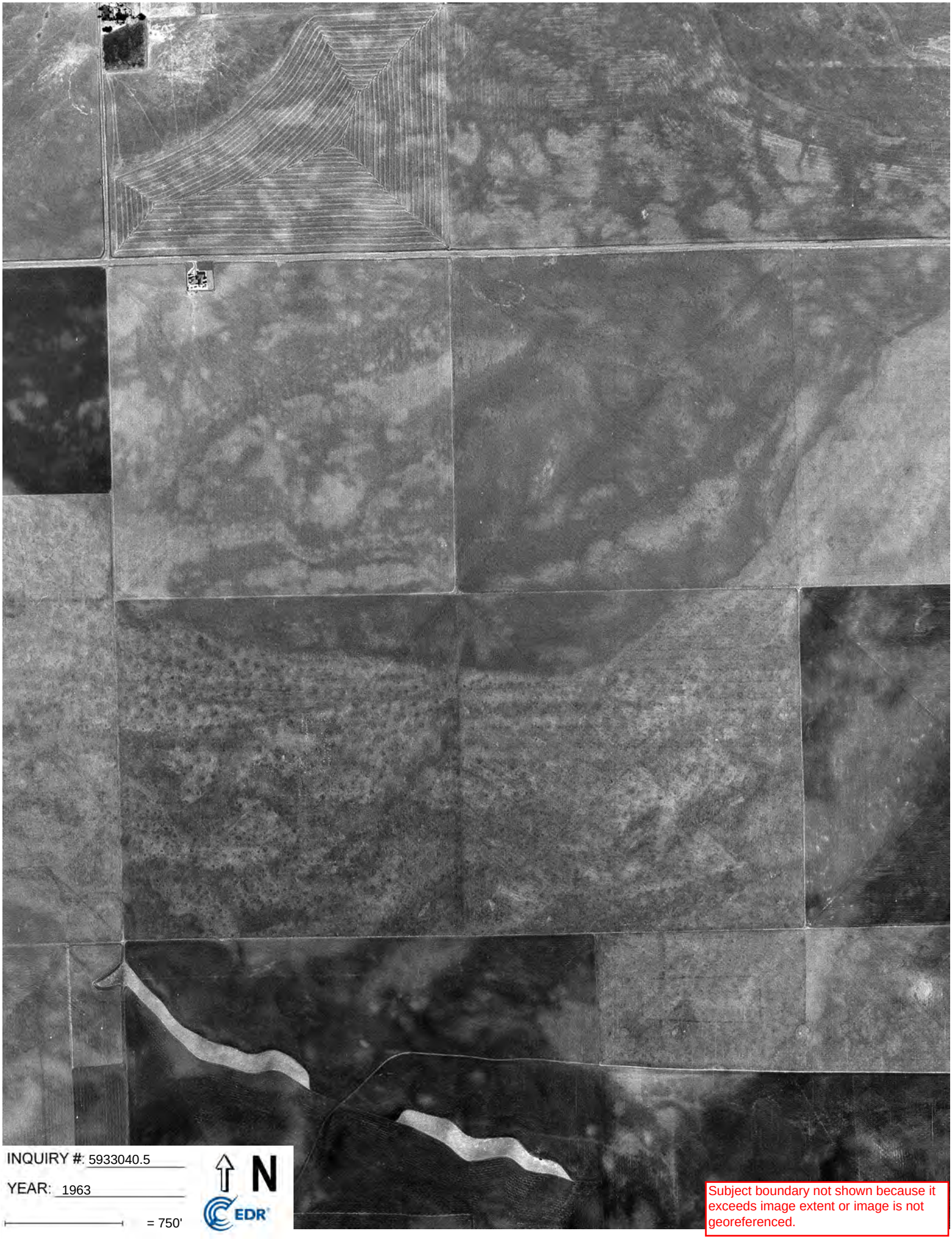
= 750'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 5933040.5
YEAR: 1977
= 750'
N
EDR



INQUIRY #: 5933040.5

YEAR: 1963

= 750'

N

EDR

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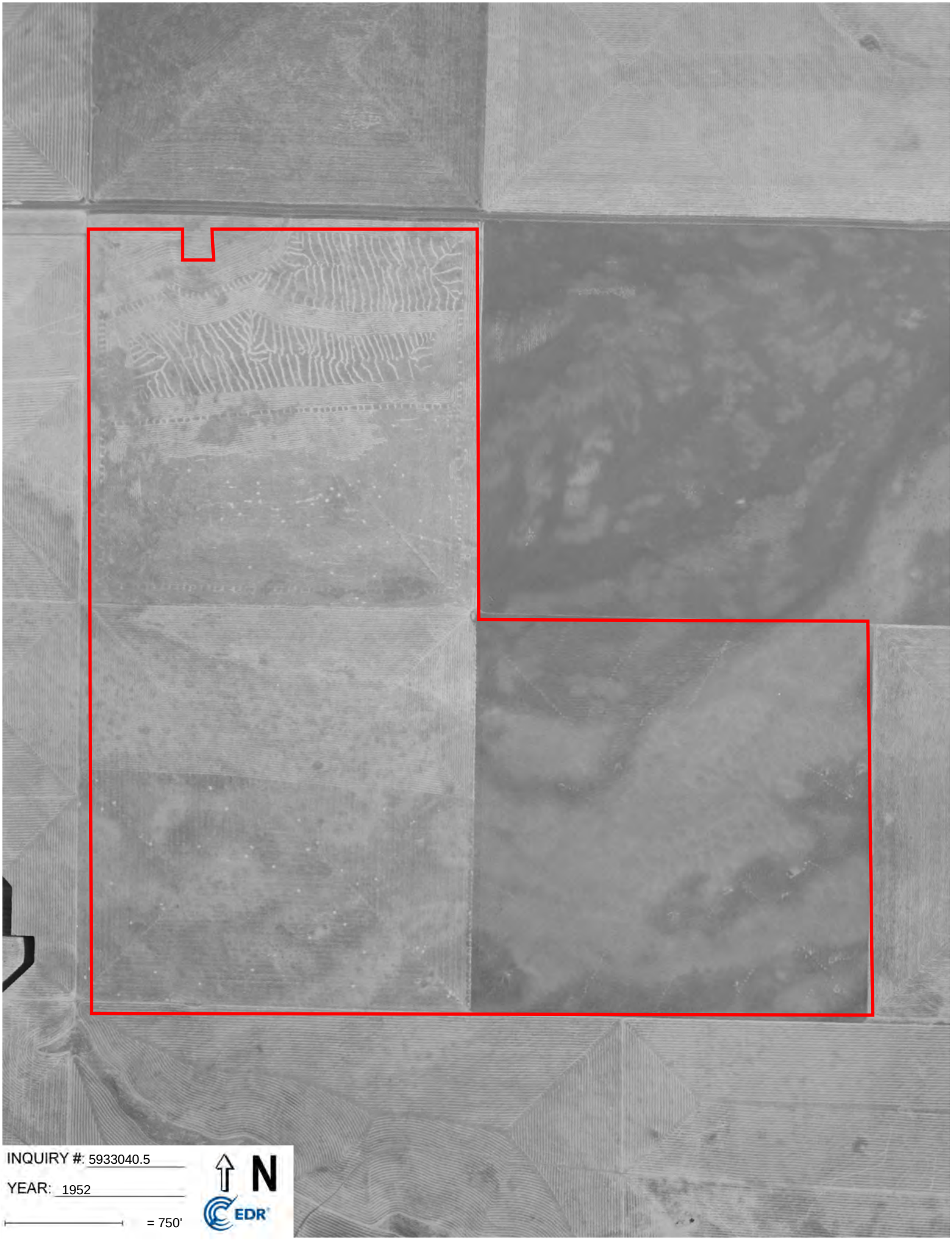

INQUIRY #: 5933040.5
YEAR: 1952
= 750'
N
EDR

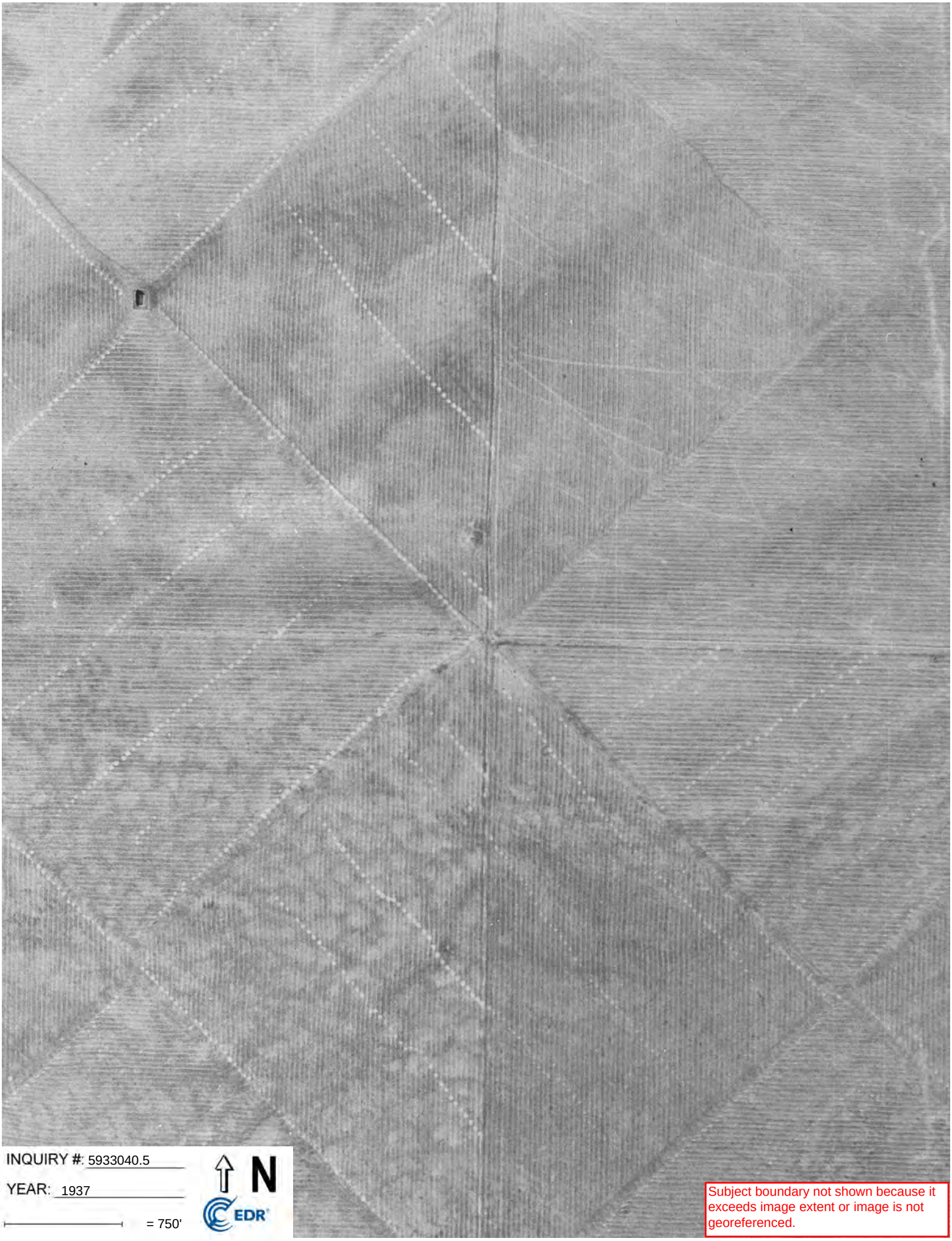
INQUIRY #: 5933040.5

YEAR: 1940

= 750'

N

EDR



INQUIRY #: 5933040.5

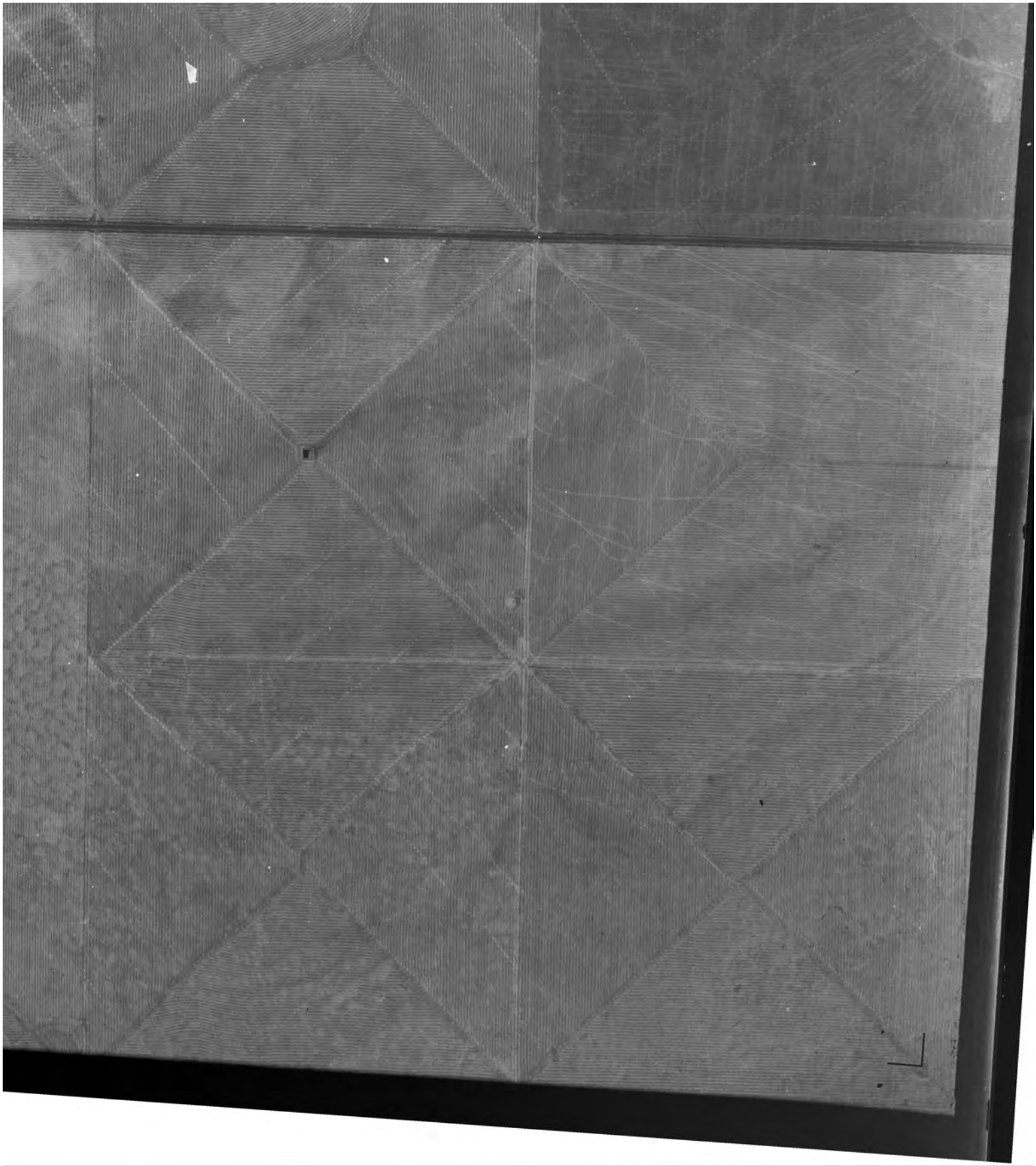
YEAR: 1937

= 750'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 5933040.5

YEAR: 1937

= 750'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

Rexford Solar Farm Add-On - Trueblood Parcels

Not Reported

California Hot Springs, CA 93207

Inquiry Number: 5933040.3

January 13, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

01/13/20

Site Name:

Rexford Solar Farm Add-On - T
Not Reported
California Hot Springs, CA 932
EDR Inquiry # 5933040.3

Client Name:

Technicon Engineering Service
4539 North Brawley Avenue
Fresno, CA 93722
Contact: Jim Vue

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Technicon Engineering Service were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 8F86-47A6-A31F

PO # 2117

Project 190662

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 8F86-47A6-A31F

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX C

USER PROVIDED INFORMATION

USER-PROVIDED INFORMATION

Per ASTM Practice E 1527-13

The provision of the following is a requirement to qualify for the various protections provided the innocent landowner, or contiguous property owner under CERCLA. This information should be provided to the best of the user's (client) knowledge. Incomplete information can result in an EPA determination if the report does not satisfy "all appropriate inquiry."

Phase I ESA Information

Property Name & Address:

Property Type: Agricultural

Type of Property Transaction: Development of Solar Farm

Site Contact: Venai Shenoy, Director - Development, 407-509-5260

User Name(s): Venai Shenoy

Company: 20SD 8me LLC

Title: Director, Development

Signature:

Date: 1/29/2020

The following information is required of the user under the November 1, 2005 "All Appropriate Inquiries (AAI) Rule.

Enclosure: ASTM X.3 Questionnaire

INTERNATIONAL
Standards Worldwide

X3. USER QUESTIONNAIRE
INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections (LLPs)*[35] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"),[36] the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).
Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?

No..

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).
Are you aware of any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No.

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).
As the *user* of this *ESA* do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No.

More on Reverse Side ≫

[35] *Landowner Liability Protections*, or *LLPs*, is the term used to describe the three types of potential defenses to Superfund liability in EPA's *Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability* ("*Common Elements*" Guide) issued on March 6, 2003.
[36] P.L. 107-118.

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).
Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

Yes, reflects FMV

(5.) Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).
Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as *user*,
(a.) Do you know the past uses of the *property*? Agriculture
(b.) Do you know of specific chemicals that are present or once were present at the *property*? no
(c.) Do you know of spills or other chemical releases that have taken place at the *property*? no
(d.) Do you know of any environmental cleanups that have taken place at the *property*? no

(6.) The degree of obviousness of the presence of likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).
As the *user* of this *ESA*, based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?

no

X3.1 In addition, certain information should be collected, if available, and provided to the *environmental professional* selected to conduct the Phase I. This information is intended to assist the *environmental professional* but is not necessarily required to qualify for one of the *LLPs*. The information includes:

(*a*) the reason why the Phase I is required,

(*b*) the type of *property* and type of *property* transaction, for example, sale, purchase, exchange, etc.,

(*c*) the complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful),

(*d*) the scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services on whether any considerations beyond the requirements of Practice E 1527 are to be considered),

(*e*) identification of all parties who will rely on the Phase I *report*,

(*f*) identification of the site contact and how the contact can be reached,

(*g*) any special terms and conditions which must be agreed upon by the *environmental professional*, and

(*h*) any other knowledge or experience with the *property* that may be pertinent to the *environmental professional* (for example, copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental condition).

APPENDIX D

REGULATORY INFORMATION

[redacted]

[redacted]

[redacted]

OPEN TO INSPECTION

To all Districts

[redacted]

[redacted]

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

PROSPECT WELL

R. D. BUSH
STATE OIL AND GAS SUPERVISOR

E. H. MUSSER, DEPUTY

121

Bakersfield, California
December 2, 1932

RECEIPT ACKNOWLEDGED
SAN FRANCISCO OFFICE

Mr. J. C. Lamb
272 North Los Robles Ave.
Pasadena, California

Dear Sir:

Your report of abandonment of well No. 1, Sec. 29, T. 23S., R. 27E., M. D. B. & M., Tulare County, dated November 17, 1932, and submitted to this Division on our form 102, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this Division, which are based on all information filed with it, have now been fulfilled.

Yours truly,

R. D. BUSH,
State Oil and Gas Supervisor

By E. H. Musser
Deputy Supervisor

CVB

cc-O.Applegate
200 Argonne Ct.
Long Beach, Calif.
E. H. Musser, Taft

CVB:HEB

FORM 123. 71605 10 [redacted] 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
NOV 21 1932
BAKERSFIELD, CALIFORNIA

721

~~Supplementary Notice~~
Form 102

Ducor. Calif. Cal. June 9-1932 1932

MR. Musser

Deputy State Oil and Gas Supervisor

Bakersfield. Cal.

PROSPECT WELL

DEAR SIR:

~~Please be advised that our notice to you dated June 9~~ 1932,

~~stating our intention to~~ (Drill, deepen, redrill, abandon) well No. 1,

Sec. 29, T. 23S., R. 27 E., M. D. B. & M. ~~J.O. Lemb. No. I.~~ Oil Field

Tulare County, must be amended on account of changed or recently discovered conditions.

The new conditions are as follows:

June. 9. The hole was cleaned out to (3780) 3794 ft. to a point of obstru ction located at 3780. ft. an impression block was run to 3780.

June II. Cement (8) 14 sacks was dumped at (3780) 3794 ft filling the hole up toabout (3700) 3697 ft. the cement was treated.

June I2. the hole was bailed and swabed for water test but showed no water entering hole.

We now propose

June. I3. 4¾ casing was perforated from 3615ft. to (3695) 3690 ft. the hole was swabed for production of oil and Gas which showed little gas and no oil bailor brought up my oppinion was gray sand and cement.

June.20. The hole was cleaned out to 373I ft. and 4 sacks of cemen dumped at 373I ft. filling the hole up to (3635) ft. 3625

June 28. A wooden block was driven down with tools to 3625 ft. and 6 sacks of cement was dumped at 3625 ft and A pressure of350 lbs. applied to the casing held for about 3 hrs.

June 29. Bailor was run to top of cement at 3595 ft. drilled out cement and tested for waterand oil, no oil, Water entered hole at about ½ BBl. in 24hrs.

6

Respectfully yours

J. A. Lewis No 6 Contractor
(Name of Company)

By Gilbert Applegate

FORM 102. 91097 .12-31 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

121

RECEIVED
NOV 21 1932
BAKERSFIELD, CALIFORNIA

LOG OF OIL OR GAS WELL

FIELD Ducor COMPANY J. O. Lamb, No I.

Sec. 29, T. 23 S., R. 27 E., M. D. B. & M., Well No. I

PROSPECT WELL

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated June 28., was filed.

SIGNED Lillard Applegate

Date Nov. 17---X - 32. Title Contractor (President, Secretary or Agent)

3697

June 28. The hole was cleaned out to 3731 ft. and 3 sacks of cemen dumped at 3731 filling the hole up to 3690 ft.
July 12. 8 sacks of Golden Gate cement treated was dumped at 3695 ft. 3697
July 13. State Mining Bureau was called to witness depth and hardn ess of cement at 3620 ft. and approved. the 4¾ casing was ripped loose at 3165 ft. and pulled from that depth.
July 16. State mining Bureau was called to witness capping of 4¾ stub at 3165 ft. the 4¾ casing was pulled from 3165 ft. a plug was driven in the 4¾ casing and 2 sacks of treated cement dumped on th plug.
July 17. The 2900' state Bureau of mines was present to witness sh oting 6¼ casing at 2830 ft. the 4½ casing was pulled out and a trip s spear run on the 4½ but could not enter 6¼ as it had collapsed tools was run to swedge out 6¼ but could not be entered.
July 22. State Bureau of Mines was called to witness dumping of cement on stub of 6¼ and 6¼ casing was recovered from 1300 ft. 1315'
and 8¼ casing was shot with a one lb. shot at 1300 ft. and pull ed from that depth
July 25. State Mining Bureau 5 was called to witness capping 6¼ a nd 6¼ stub at 1300 ft. with 7 sacks of treated cement
The 10in casing was shot at 1170 ft. and pulled from that depth
July 27. State Mining Bureau was called to witness capping 10 i stub and dumping 8 sacks of treated cement on the plug.
The 12½ in. casing was shot with 1 lb. shot at 593 ft. and pull ed from that depth.
July 28. A small bridge was made on the 12½ in stub and two sacks of treated cement dumped on the bridge the tools were run to nock out bridge
July 29. The hole was capped temperarly so the well may be entered to try for water well and abandoned.

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

121

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

PROSPECT WELL

Special Report on Operations Witnessed

No. T-4-10664

Bakersfield, Cal. August 2, 1932

Mr. J. O. Lamb
272 N. Los Robles Ave., Pasadena, Cal.

Agent for J. O. Lamb ~~Company~~

DEAR SIR:

Operations at your well No. 1 Section 29, T. 23S., R. 27E., M.D. B. & M., --- Oil Field, in Tulare County, were witnessed by C. C. McGettigan, representative of the supervisor, on July 25, 1932. There was also present G. Applegate and C. R. Owens, Contractors

Casing Record Total depth 4330'; 16" landed 608'; 13" landed 1208'; shot and pulled from 593'. 10⅝" cemented 1728'; shot at 1188', shot and pulled from 1170', stub capped with wooden plug and 7 sacks of cement. 8-5/8" cemented 2950'; shot and* pulled from 1300'. Stub capped with wooden plug and 5 sacks of cement. 6-5/8" cemented 3603', shot at 2800', shot and pulled from 1315', stub capped with wooden plug and 3 sacks of cement. 4½" cemented 4220', parted at 3815', perforated 3615'-3690', cemented through perforations 3615'-3625', plugged with cement 3794'-3620', shot and pulled from 3165', stub capped with a wooden plug and 2 sacks of cement. JUNK: 10⅝", 1330'-1500'; 8-5/8" 1700'-1715'.

The operations were performed for the purpose of witnessing the shooting and cementing of the 10⅝" and 13" casings.

and the data and conclusions are as follows:

At 11:30 a. m., July 25, 1932, the Inspector first visited the well and Mr. Applegate reported:

1. On July 22, the 8-5/8" casing was recovered from 1300'.
2. A wooden plug was driven into the 8-5/8" casing at 1300'.

The Inspector noted the following:

1. Tension was momentarily applied to the 10⅝" casing with the "elevators" to assure that it was not loose.
2. 5 sacks of Monolith cement was then dumped at 1300'.
3. A 1½ lb. "collar buster" shot was then exploded in the 10⅝" casing at 1188'.
4. The casing was probably parted at that depth but it could not be pulled due, probably, to excessive bulge.
5. A 1 lb. "collar buster" shot was exploded in the 10⅝" at 1170' and the casing was parted at this depth.

Operations were completed at 5:00 p. m.

R. D. BUSH
State Oil and Gas Supervisor

By (Continued on Page 2) Deputy

FORM 109-X. 78978 6-30 3M
CALIFORNIA STATE PRINTING

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
OR
Special Report on Operations Witnessed

No. T-4-10664
Page 2

J. O. Lamb Company

Well No. 1, Sec. 29, T. 23S., R. 27E., M. D. B. & M.,

At 2:00 p. m., July 27, the Inspector again visited the well and Mr. Applegate reported that the $10\frac{3}{4}$" casing was recovered from 1170', where a wooden plug was then driven in.

The Inspector noted the following:

1. Tension was momentarily applied to the 13" casing with the "elevators" to assure that it was not loose.
2. 7 sacks of Monolith cement (treated) was dumped at 1170'.
3. A 1 lb. "collar buster" shot was exploded in the 13" casing at 593', where the same parted.

Operations were completed at 6:30 p. m.

The plugging and shooting operations as witnessed and reported are approved.

This concludes the tests required to be witnessed on the abandonment work done on this well.

CC-G. Applegate
Ducor, California
E. H. Musser, Taft
CCH:Sed

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy
C.V.B.

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

121

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

Returned for Signature 8/1/32 C.V.B.

No. T-4-10658

Bakersfield, Cal. July 27, 1932

Mr. J. O. Lamb
272 N. Los Robles Ave., Pasadena, Cal.

PROSPECT WELL

Agent for J. O. Lamb Company.

DEAR SIR:

Operations at your well No. 1 Section 29, T. 23S., R. 27E., M. D. B. & M., ----- Oil Field, in Tulare County, were witnessed by C. V. Bloom, representative of the supervisor, on July 22, 1932. There was also present G. Applegate and C. R. Owens, Abandonment Contractors.

Casing Record Total depth 4330'; 16" landed 608'; 13" landed 1208'; 10¾" cemented 1728'; 8-5/8" cemented 2950'; shot at 1300'; 6-5/8" cemented 3603', shot at 2800', cut and pulled from 1315', stub capped with wooden plug and 3 sacks of cement; *

The operations were performed for the purpose of witnessing the shooting of the 6-5/8" casing at 2925' or above, the placing of a cement plug on the 6-5/8" cut-off, and the shooting **

and the data and conclusions are as follows:

*4½" cemented 4220', parted at 3815', perforated 3615'-3690', cemented through perforations 3615'-3625', plugged with cement 3794'-3620', cut and pulled from 3165', stub capped with a wooden plug and 2 sacks of cement. JUNK: 10¾", 1330'-1500'; 8-5/8" 1700'-1715'.

**of the 8-5/8" casing at 1703' or above, in the process of abandonment.

The Inspector visited the well on July 17 and noted the following:
1. The 6-5/8" casing was shot at 2800' with 1 lb. of 80% gelatin.
2. While shooting as above, tension was held in the 6-5/8" through the inverted packer (See paragraph #4 of report No. T-4-10656) and the 4½" casing.

On July 22, Mr. Applegate reported the following:
1. When the 4½" was pulled up, the 6¼" was lost and could not be re-entered even after four days of fishing and swedging.
2. A wooden plug was driven into the 6-5/8" cut-off at 1315'.

On July 22, the Inspector noted the following:
1. The bailer spudded at 1315'.
2. 3 sacks of treated Golden Gate cement was dumped at 1315'.
3. The 8-5/8" casing was shot at 1300' with 1 lb. of 80% gelatin.

The plugging and shooting operations as witnessed and reported are approved.

CC-G. Applegate
Ducor, Calif.
E. H. Musser, Taft

CVB:SED

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy
C.V.B.

121

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T-4-10656

Bakersfield, Cal. July 20, 1932

Mr. J. O. Lamb

272 N. Los Robles Ave., Pasadena, Cal.

PROSPECT WELL

Agent for J. O. Lamb ~~Company~~

DEAR SIR:

Operations at your well No. 1 Section 29, T. 23 S, R. 27 E, M.D. B. & M., ------- Oil Field, in Tulare County, were witnessed by C. V. Bloom, representative of the supervisor, on July 16, 1932. There was also present C. R. Owens, Abandonment Contractor and Fred Evans, Driller.

Casing Record Total depth 4330'; 16" landed 608'; 13" landed 1208'; 10¾" cemented 1728'; 8-5/8" cemented 2950'; 6-5/8" cemented 3603', cut and pulled from 1315'; 4¾" cemented 4220', parted at 3815', perforated 3615'-3690', cemented through perforations *(see below)

The operations were performed for the purpose of witnessing the placing of a cement plug proposed to be placed on the 4¾" cut-off at 3578' or above in the process of abandonment.

and the data and conclusions are as follows: *(Continued) 3615'-3625', plugged with cement 3794'-3620', cut and pulled from 3165', stub capped with a wooden plug and 2 sacks of cement.
JUNK: 10¾", 1330'-1500'; 8-5/8", 1700'-1715'.

On July 13, the Inspector visited the well and noted that no viabration was obtained in the 4¾" casing when jarred at 3426'.
On July 16, Mr. Evans reported the following:
1. Viabration in the 4¾" casing was found at 3165'.
2. The 4¾" casing was cut at and pulled from 3165'.
3. A wooden plug was driven into the 4¾" cut-off at 3165'.
4. The 4¾" casing was re-run with an inverted packer to the 6-5/8" to 1400'.
The Inspector noted the following:
1. The bailer spudded at 3165'.
2. 2 sacks of treated Golden Gate cement was dumped at 3165'.
The cutting and plugging operations as witnessed and reported are approved.

CC-C. Applegate
Ducor, Calif.
E. H. Musser-Taft.
CVB:SMB

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy
C.V.B.

FORM 109-A. 81365 12-30 20M
CALIFORNIA STATE PRINTING OFFICE

121

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T-4-10655

Bakersfield, Cal. July 20, 19 32

Mr. J. O. Lamb
272 N. Los Robles Ave, Pasadena, Cal.

PROSPECT WELL

Agent for J. O. Lamb ~~Company~~

DEAR SIR:

Operations at your well No. 1 Section 29, T. 23 S, R. 27 E, M.D. B. & M., ------ Oil Field, in Tulare County, were witnessed by C. V. Bloom, representative of the supervisor, on July 12, 19 32. There was also present G. Applegate and C. R. Owens, Abandonment Contractors.

Casing Record Total depth 4330'; 16" landed 608'; 13" landed 1208'; 10¾" cemented 1728'; 8-5/8" cemented 2950'; 6-5/8" cemented 3603', cut and pulled from 1315', 4¾" cemented 4220', parted at 3815', perforated 3615'-3690', cemented through perforations *(see below)

The operations were performed for the purpose of witnessing the placing of a cement plug proposed to be placed from 3697' to 3615' in the process of abandonment.

and the data and conclusions are as follows: *(Continued) 3615'-3625', plugged with cement 3794'-3620'.
JUNK: 10¾", 1330'-1500'; 8-5/8", 1700'-1715'.

Mr. Applegate reported the following:

1. The 6-5/8" casing has been cut and pulled from 1315' but heretofore not reported.
2. The hole was cleaned out to 3794' and 14 sacks of treated Golden Gate cement was dumped at 3794' filling the 4¾" to 3697'.
3. The 4¾" casing was perforated from 3615' to 3690'.
4. The 4¾" casing was bridged with cement at 3625' and 6 sacks of treated Golden Gate cement was dumped on the bridge. 5½ sacks of the cement was forced to the formations under a pressure of 350 lb.
5. The 4¾" casing was cleaned out to 3697' and a swabbing test showed no oil, no gas, and only about 2.0 barrels of water per 24 hr.

The Inspector noted the following:

1. The bailer spudded at 3697'.
2. 8 sacks of treated Golden Gate cement (enough to fill 100' in 4¾" casing) was dumped at 3697'.

On July 13, the Inspector again visited the well and noted that the bailer spudded at 3620' and brought up a sample of set cement.

The plugging operations as witnessed and reported are approved.

7/21/32 Shot 2780' 6" collapsed cannot get thru.
Shot + pulled 3' from 1315' + cap 6" + 8" studs together

CC-C. Applegate
Ducor, Calif.
E.H.Musser-Taft.

CVB:SMB

R. D. BUSH
State Oil and Gas Supervisor

By C. H. Musser Deputy
C.V.B.

FORM 111. 92582 2-32 20M
CALIFORNIA STATE PRINTING OFF

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P-4-14458

Bakersfield, Cal. July 11, 1932

MR. J. O. Lamb

272 N. Los Robles Ave., Pasadena, Cal.

Agent for J. O. LAMB Company.

PROSPECT WELL

DEAR SIR:

Your proposal to abandon Well No. 1,

Section 29, T. 23S, R. 27E, M.D.B. & M., ------ Oil Field, Tulare County,

dated July 11, 1932, received July 11, 1932, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

The condition of the well is as stated in the notice quoted below.

THE NOTICE STATES:

"The present condition of the well is as follows:

TOTAL DEPTH: 4330'.

16" landed 608'; 13" landed 1208'; 10-3/4" cemented 1728'; 8-5/8" cemented 2950'; 6-5/8" cemented 3603'; 4-1/2" cemented 4220', parted at 3815', perforated 3615'-3690', cemented through perf. 3615'-3625'; 4-1/2" plugged with cement 3794'-3697'.

JUNK: 10-3/4" - 1330'-1500'; 8-5/8", 1700' - 1715'.

Production test after perforating 6-1/4" showed no oil, gas nor water."

PROPOSAL:

"The proposed work is as follows:

Lamb - Bloom - July 19 '32. want to clean out the plug on the 13" cut off so as to make a water well. OK. but put in cement between 13" & 16" & knock out the plug thru the 13" C.V.B.

Dump cement plug from 3697'-3615' or above.

Cut and pull 4-1/2" from 3578' or above

" " " 6-5/8" " 2925' " "

" " " 8-5/8" " 1703' " "

" " " 10-5/8" " 1190' " "

" " " 13" " 590' " "

All cut off stubs will be capped by driving in a wooden plug and dumping cement enough to fill 10' in the casing of next larger size.

All casing not plugged with cement will be filled with sand or mud.

The 16" casing will be plugged with cement from 10' to the surface of the ground."

DECISION:

THE PROPOSAL IS APPROVED.

Kindly notify this Division to witness:

1. The cutting of all the above casings.
2. The dumping of all cement plugs.

NOTE: Upon completion of the above outlined work, the Company should submit in duplicate, on our form No. 102, a complete record of the work done.

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy
C.V.B.

CC-G. Applegate
Ducor, Calif.
E.H.Musser-Taft.
CVB:MB

FORM 108. 75114 3-30 5M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUL 11 1932
BAKERSFIELD, CALIFORNIA

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin

~~Bakersfield~~ Ducor Cal. July 11, 1932

MR. E. H. Musser,

Deputy State Oil and Gas Supervisor

Bakersfield, Cal.

PROSPECT WELL

DEAR SIR:

In compliance with Section 16, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to abandon well No. 1, Sec. 29, T. 23 S R. 27 E, M.D. B. & M., ------ Oil Field, Tulare County, commencing work on the 12th day of July 1932

The present condition of the well is as follows:

TOTAL DEPTH: 4330'.
16" landed 608'; 13" landed 1208'; 10¾" cemented 1728'; 8-5/8" cemented 2950'; 6-5/8" cemented 3603'; 4¾" cemented 4220', parted at 3815', perforated 3615'-3690', cemented through perf. 3615'-3625'; 4¾" plugged with cement 3794'-3697'.
JUNK: 10¾"- 1330'-1500'; 8-5/8", 1700# - 1715'.
Production test after perforating 4¾" showed no oil, gas nor water.

The proposed work is as follows:

Dump cement plug from 3697'-3615' or above.
Cut and pull 4¾" from 3578' or above
" " " 6-5/8" " 2925' " "
" " " 8-5/8" " 1703' " "
" " "10-5/8" " 1190' " "
" " 13" " 590' " "
All cut off stubs will be capped by driving in a wooden plug and dumping cement enough to fill 10' in the casing of next larger size.

All casing not plugged with cement will be filled with sand or mud.

The 16" casing will be plugged with cement from 10' to the surface of the ground.

Reference to file of data

Maps	Model	Cross Section	Cards	Forms 114	Forms 155
				406	✓

Respectfully yours

J. O. LAMB
Name of Company or Operator

By Gilbert Applegate

except apparatus

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

FORM 111. 92582 2-32 20M
CALIFORNIA STATE PRINTING OFFICE

121

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

PROSPECT WELL

Report on Proposed Operations

No. P-4-14444

Bakersfield, Cal. June 8, 19 32

Mr. J. O. Lamb
272 N. Los Robles Ave., Pasadena, Cal.

Agent for J. O. Lamb Company

DEAR SIR:

Your plug & alter casing proposal to Well No. 1,
Section 29, T. 23S., R. 27E., M.D. B. & M., -- Oil Field, Tulare County,
dated June 7, 32 19, received June 7, 32 19, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: As stated in the notice.

THE NOTICE STATES:

"The present condition of the well is as follows:

Total depth 4330'

16" landed 608'
13" " 1208'
10 3/4" cemented 1728'
8-5/8" " 2950'
6-5/8" " 3603'
4-3/4" " 4220', parted at 3815'

Junk: 10 3/4", 1330'-1500'; 8-5/8", 1700' ± - 1715'"

PROPOSAL:

"The proposed work is as follows:

Clean out to 3815', or to as low as possible; pull on 4 3/4"; if loose will notify your Division, if not loose will place cement plug at 3815' and test casing; if free from leaks, will perforate 3685'-3615' and try for production.

Your Division will be notified to witness the placing, the location and hardness, and the effectiveness of the cement plug."

DECISION:

THE PROPOSAL IS APPROVED.

NOTE: 1. A complete log, history, and core record of this well should be filed in duplicate on our forms as soon as possible.

2. Upon completion of the present work, a report in duplicate on our form 102 should be filed.

CC-E.H.Musser, Taft

EHM:SED

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy

Lamb phone Ducor 2

FORM 107. 68217 6-29 10M
CALIFORNIA STATE PRINTING [redacted]

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUN 7 1932
BAKERSFIELD, CALIFORNIA

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given fifteen days before work begins when possible

Bakersfield, Cal. June 7, 1932

MR. E. H. Musser

Deputy State Oil and Gas Supervisor

Bakersfield, Cal.

PROSPECT WELL

DEAR SIR: P & A. C.

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at well No. 1
(Cross out unnecessary words)

[redacted], Sec. 29, T. 23S., R. 27E., M. D. B. & M.

-- Oil Field, Tulare County.

The present condition of the well is as follows:

Total depth 4330'

16" landed 608'
13" " 1208'
10¾" cemented 1728'
8-5/8" " 2950'
6-5/8" " 3603'
4-3/4" " 4220', parted at 3815'

Junk: 10¾", 1330'-1500'; 8-5/8", 1700'± - 1715'

The proposed work is as follows:

Clean out to 3815', or to as low as possible; pull on 4¾"; if loose will notify your Division, if not loose will place cement plug at 3815' and test casing; if free from leaks, will perforate 3685'-3615' and try for production.

Your Division will be notified to witness the placing, the location and hardness, and the effectiveness of the cement plug.

J. O. Lamb.
272 N. Los Robles, Pasadena

cc. G. Applegate
Fred Evans

Reference to file of data

Maps	Model	Cross Section	Cards	Forms 114	Forms 121
				401	sent

Respectfully yours

J. O. Lamb
Name of Company or Operator
By G. Applegate

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

CONTRACTOR.

FORM 103. 66276 6-29 10M
CALIFORNIA STATE PRINTING

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 26 1929
TAFT, CALIFORNIA

History of Oil or Gas Well

FIELD Ducor, ~~Tulare County, Calif.~~ Drilling Co COMPANY J.H.Hinckley Ducer Drilling Co.

Sec. 29, T. 23 S., R. 27 E. M.D.B.& M. B. & M., Well No. 1

Signed J. H. Hinckley

Date ~~Sept., 24, 1929.~~ Title

President, Secretary or Agent

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reason for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

DIVISION OF OIL AND GAS
RECEIVED
SEP 30 1929
BAKERSFIELD, CALIFORNIA

Casing record;

15½" set at 608 feet - - Spudded
12½" " " 1208 " - - Spudded
10½" " " 1728 " - - Cemented
8¼" " " 2950 " - - Cemented
6¼" " " 3603 " - - Cemented
4¼" " " 4220 ". - - Cemented

All cement jobs tested by bailing water as follows.
cemented at 1728' and drilled below shoe 5 feet. bailed down to 1000 feet and let stand for 24 hours with no water comeback at all.
comented at 2950 feet and drilled down 5 feet below shoe and bailed down to 1500 feet and let stand for 24 hours with no water comeback at all.
cemented at 3603 feet and drilled down ten feet below and bailed down 2000 ft and let stand for 24 hours with no comeback of water at all.
cemented at 4220 feet and drilled down five feet below show and and bailed down 2000 feet and let stand for 24 hours with no comeback of water at all.

Note: the strings of casing were set principally because this is a cable tool job and we were having difficulty in carrying the casing.
ON a few occasions when water developed lower down, we verified the casing shutoff by bridging back to within five feet of the shoe and repeating the test as described above.
At this time I am milling in an effort to connect the 4½" casing.

FORM 103. 68276 6-29 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

FIELD Ducor, Tulare County, Calif. COMPANY J. H. Hinckley

Sec. 29, T. 23 S., R. 27 E., M. D. B. & M., Well No. 1

(Original)
Signed J. H. Hinckley

Date Aug. 18, 1929 Title

President, Secretary or Agent

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reason for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

Casing record below 10".

Set 8½" at 2950 feet. tested by bailing down to 1500 feet and letting stand for 24 hours with no comeback of water at all. Test made after drilling five feet out of casing.

Set 6¼" at 3603 feet Tested as above except that I bailed the water down 2000'
Set 4½" at 4220 feet Tested as above except that I bailed the water down 2000'

Present depth of well is 4330 feet.

Note: The foregoing tests were made by first drilling out the cement, to a depth of five below the shoe in each instance. Then the water in the hole was bailed down as above, a mark put on the sand line at the exact depth the last water was taken from. Then the hole was capped with a valve open just enough to allow the excape of any possible pressure that might be built up by the water coming back and allowed to stand for 24 hours. Then the valve removed and the bailer run to the string mark on the sand line and in each instance there was no water picked up by the bailer.

These lines of casing were set principally because this is a cable tool job and we were having difficulty in carrying the casing. Cementing jobs were all done by the perkins outfit.

Sinclair Well #1. Sec.29, T. 23 S. R. 27 E. M.D.B. M.
Tulare County, Calif.

From surface to 175 feet.
195 Water sand.
410 yellow clay sandy clay streaks.
420 blue shal
435 silt
475 blue shale
479 silt
495 blue shale
497 silt
525 blue shale
545 green shale, some gas and oil colors.
613 blue shale some gas and oil colors.
621 water sand.
629 hard shale
654 blue shale oil colors.
658 water sand
679 blue shale
684 hard sand
794 blue shale some gas and oil colors
757 dark gray sand some gas
845 blue shale
860 hard shell sandy
912 sticky blue shale good showing gas and oil
916 brown shale showing colors
945 blue shale
965 brown shale and sea shell showing color
965 blue shale and sea shell showing colors
1036 brown shale showing colors
1064 blue shale showing colors
1085 brown shale showing colors
1130 hard sand
1131 blue shale showing colors
1282 shell
1525 blue shale showing colors
1408 hard sand
1428 blue shale
1440 blue shale sandy
1470 blue shale sticky showing colors
1496 blue shale sandy
1500 shell
1515 brown shale
1542 loose sand
1553 blue shale
1556 sandy blue shale
1559 shell
1568 blue shale sticky showing colors
1571 shell
1576 gray shale
1582 shell
1633 blue shale showing some color
1660 sandy blue shale considerable gas.
1680 water sand
1685 grayshale
1713 hard gray shell
1728 sticky gray shale, set 10" casing
1732 hard sandy shell cutting colors
1737 oil sand see cut.
1741 sandy cutting good colors.
1754 water sand
1762 gray shale
1765 shell
1770 sandy gray shale
1790 brown shale showing colors
1791 shell
1800 hard sand
1845 sea shell and gray shale
1846 sandy gray shale
1871 hard sand
1895 gray shale
1903 hard sand
1908 blue shale

Mono

1921 sandy blue shale showing colors
1926 hard sand
1934 water sand
1944 gray shale
1957 blue shale showing colors
1961 sandy blue shale showing colors
1964 hard sand
1985 sticky blue shale showing colors
2014 sandy gray shale
2016 shell
2020 gray shale
2024 sticky blue shale showing colors
2027 sandy gray shale
2032 hard sand
2036 sandy gray shale
2084 hard sand
2180 sticky blue shale showing colors
2196 water sand dry
2204 hard sand
2219 sticky blue shale showing colors
2243 sandy blue shale showing colors
2265 sandy gray shale
2335 brown shale all showing colors
2358 sandy brown shale
2364 hard sand
2366 brown shale showing colors
2394 hard sand
2410 sand
2418 hard sand
2456 sand
2463 brown shale
2470 hard sand
2474 sticky blue shale showing colors
2486 sandy blue shale showing colors
2490 shell
2496 blue shale showing colors
2506 sticky blue shale showing colors
2535 sandy blue shale
2546 sea shell and hard sand
2551 hard sand
2576 sandy brown shale some gas and good colors
2580 sandy blue shale some gas and good colors
2587 hard sand
2598 brown shale good gas and showing colors
2607 sandy blue shale good gas and showing colors
2610 shell
2624 brown shale some gas and more colors
2631 hard sand
2754 sandy blue shale some gas increasing colors
2790 shell
2791 black shale showing live oil in bailer
2797 hard gray sand
2820 brown shale showing live oil in bailer
2826 water sand and gravel
2842 brown shale showing good colors
2858 sandy blue shale showing good colors
2912 hard black shale extremely volatile oil in bailer
3036 hard gray sand same showing as foregoing
3071 hard black shale live oil showing increasing
3185 hard gray sand former showing increasing
3188 sticky blue shale
3190 hard gray shale former showing increasing
3203 hard black shale
~~3212 blue shale former showing increasing~~
3214 hard black shale former showing increasing
3217 hard sand showing increasing
3220 hard black shale showing increasing
3227 hard sand showing increasing
3234 hard black shale showing increasing
3238 sticky blue shale
3241 lime
3248 hard blue shale & lime
Continued above on side.

3280 hard sand showing more than at 3234.
3463 hard black with streaks of sand showing continuing increasing live oil all the way.
bridged back to 2950 and set 6" string.
This last showing continued down to 3494 with showing continually increasing.
3494 to 3506 hard brown shale see sample
3506 to 3514 hard sand cutting color with lots of gas. continued down to 3522, where we took core of blue shale carrying a light oil.

3514 down to 3615 alternating blue and black shale in bodies ranging 2 to 5 feet.
3615 broke into a gas sand that threatened to get away. This continued down to present depth with two hard shells of about 4 feet and 10 feet, gas and oil showing increasing all the way to bottom
3750
an down
4089 a.f.
Present
Apr. 27-1926

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

MEMORANDUM OF TELEPHONE OR PERSONAL CONVERSATION

4 P (Time) M. Aug. 7th (Date) 1925

Company Ducore Drilling Co. Well No. 1

Field _____ Sec. 29 T. 23 S R. 27 E M.D. B. & M.

On this date a ~~telephone~~ personal conversation was held, concerning the above well, with Mr. Hinkley, President

of the Ducore Drilling Company.

PROSPECT WELL

Details of operations were discussed as follows:

The well formerly known as Big 4 Oil Co. Well No. 1 is now Ducore Drilling Co. Well No. 1

The 10,000,000 cu.ft. flow of gas reported by the Bakersfield Echo is erroneous.

The well is drilling at a depth of 3637' and from bottom the boiler shows a small amount of gas

bailer

1921

Signed R. G. Rogers

Title Inspector - Bakersfield

Form 136. 15060 11-21 3M

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

Frost

No. P-4-6715

Bakersfield, Cal. May 24, 1923

Mr. Bart Baxley

PROSPECT WELL

Ducor, Cal.

Agent for Big Four Oil Syndicate Company

DEAR SIR:

Your supplementary proposal to drill Well No. 1, Section 29 T. 23 S. R. 27 E. M.D. B. & M.

Tulare County, dated May 22, 1923 (Received May 23, 1923)

has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The new conditions are as follows:

Casing Record:	15⅝"	landed	596'
	12½"	"	1309'
	10"	cemented	1729'
Junk:	10"	from 1330' to 1500'	
	8¼"	one joint at	1715'

Froze 10" casing at 1500' and drilled ahead to 1715' with 8¼" casing where we lost bottom joint.
Pulled 8¼" casing, shot off 10" at 1330', redrilled and cemented 10" at 1729'.
Drilled out of the shoe about 2' and bailed to 600' and well stood all day without rise in fluid level.
Started to drill ahead for test and hit water sand 8' below shoe."

PROPOSAL:

"We now propose to drill ahead with 8¼" casing and make a shut-off above first oil ~~Recommendation~~ showing."

RECOMMENDATION:

The proposal as quoted above is approved.

Kindly notify this office to witness a bailing test of the effectiveness of the 8¼" shut-off.

Reference to file of data

Maps	Model	Cross Section	Cards	Forms 115	Forms 121
				✓	

REM/MHC

R. E. COLLOM
State Oil and Gas Supervisor

By W. W. Orcutt Deputy

Form 111. 22418 11-22 10M

Form 123. 35831—1-2[redacted]

STATE MINING [redacted]REAU

CALIFORNIA STATE MINING BUREAU

RECEIVED

Department of Petroleum and Gas

MAY 2 3 1923

BAKERSFIELD, CAL.

SUPPLEMENTARY NOTICE

Ducor Cal. May 22, 1923

Mr. W. W. Copp

Deputy State Oil and Gas Supervisor

Bakersfield Cal.

Dear Sir:

Please be advised that our notice to you dated October 23, 1922, stating our intention to drill (Drill, deepen, redrill, test, abandon) well number 1 Section 29 T. 23 S. R. 27 E., M. D. B. & M., ~~XXXXXX~~ Oil Field, Tulare County, must be amended on account of changed or recently discovered conditions.

The new conditions are as follows: Casing Record: 15½" landed 596'
12½" " 1309'
10 " cemented 1729'
Junk: 10 " from 1330' to 1500'
8¼" one joint at 1715'

Froze 10" casing at 1500' and drilled ahead to 1715' with 8¼" casing where we lost bottom joint.

Pulled 8¼" casing, shot off 10" at 1330', redrilled and cemented 10" at 1729'.

Drilled out of shoe about 2' and bailed to 600' and well stood all day without rise in fluid level.

Started to drill ahead for test and hit water sand 8' below shoe.

We now propose To drill ahead with 8¼" casing and make a shut-off above first oil showing.

Respectfully yours,

Big 4 Oil Syndicate
(Name of Company)

By Fred E. Evans

Reference to file of data

Maps	Model	Cross Section	Cards	Forms	
				114	121
				✓	✓

BIG 4 OIL SYNDICATE

A Common Law Trust

Liability Limited to Property of Trust—No Personal Liability

E. A. BULLOCK, General Manager

412 Security Building
Los Angeles, Calif.

Phone 660-32

Ducor Calif.
Jan. 1st - 1923

Mr E. E. Thoms.
Bakersfield.

Dear Sir. - It was our intention to carry our 12½ casing to 1500. feet, but we lost it at 1310 feet, we are now carrying our 10 inch which we intend for water string.

We do not know at what depth we will set it.

Very Truely Yours.

Fred L Evans
Ducor,
Box 54 Calif.

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P---4-6686--

Bakersfield, Cal. October 23, 192--2

Mr. Fred C. Evans

Ducor, Cal.

Agent for BIG FOUR OIL SYNDICATE Company

DEAR SIR:

Your proposal to drill Well No. 1, Section 29 T. 23 S. R. 27 E. M.D. B. & M.,

OilDale Tulare County, dated October 23, 192--2

has been examined in conjunction with records filed in this office. (Received October 23, 1922)

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 300 feet N. and 300 feet E. from SW Cor. Section.

The elevation of the derrick floor above sea level is ..... feet.

We estimate that productive oil or gas formation should be encountered at a depth of about 1600 feet, more or less."

PROPOSAL:

"We propose to use the following strings of casing either cementing or landing them as here indicated:

Size of Casing	Weight Per Foot	New or Second Hand	Depth	Landed or Cemented
18" S.P.			about 40'	Landed
15⅜"	70#	New	" 700'	"
12⅜"		"	?	

Recommendations: "It is understood that if changes in this plan become necessary we are to notify you if possible before cementing or landing the casing."

RECOMMENDATION:

This office has no data on which to base an estimate of the depth at which oil or gas bearing formations may be encountered at this location or the depth at which water should be shut off.

The proposal is approved with the recommendation that a water shut-off be effected above the first oil or gas bearing formation encountered in drilling.

Kindly notify this office when the first oil or gas is noted and also before landing or cementing any possible water string.

This office must be notified to witness a bailing test of each possible water string.

We would appreciate the filing of a memorandum log on the back of the Notice of Test of Water Shut-off.

CC:C.C.Thoms

R. E. COLLOM
State Oil and Gas Supervisor

By C. C. Thoms Deputy

Form 111. 19864 6-22 10M

Form 105. 47750 8-1[illegible]M

STATE MINING BUREAU
RECEIVED
OCT 23 1922
BAKERSFIELD, CAL.

CALIFORNIA STATE MINING BUREAU

Department of Petroleum and Gas

Notice of Intention to Drill New Well

This notice must be given before drilling begins

107-00405

Ducor, Cal. October 23, 1922

Mr. C. C. Thoms

Deputy State Oil and Gas Supervisor

Bakersfield, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, notice is hereby given that it is our intention to commence the work of drilling well number 1 Section 29 T. 23 SR. 27 E, M. D. B. & M., ~~Oil Field~~, Tulare County.

The well is 300 feet N. of ~~XXX~~, and 300 feet E. of ~~XXX~~ from SW Cor. Section
(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the derrick floor above sea level is _____ feet.

We propose to use the following strings of casing either cementing or landing them as here indicated:

Size of Casing, Inches	Weight, Lbs. Per Foot	New or Second Hand	Depth	Landed or Cemented
18" S. P.			about 40'	Landed
15½"	70	New	" 700'	"
12½"		"	?	

It is understood that if changes in this plan become necessary we are to notify you if possible before cementing or landing the casing.

We estimate that productive oil or gas formation should be encountered at a depth of about 1600 feet, more or less.

Respectfully yours,

BIG FOUR OIL SYNDICATE
(Name of Company or Operator)

By Fred le Grows

Reference to file of data

Maps	Model	Cross Section	Cards	Forms	
				114	121
			✓	35	✓

Address notice to Deputy State Oil and Gas Supervisor in charge of district where well is located

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL ABANDONMENT

Bakersfield, California

July 12, 1983

Mr. George R. LaPerle
WESTERN CONTINENTAL OPERATING CO.
1400 Easton Drive, Suite # 141
Bakersfield, CA 93309

Your report of abandonment of well "Stockdale-Carlisle" 1
(Name and number),
A.P.I. No. 107-20198, Section 29, T. 23S, R. 27E, M.D. B. & M.,
----------field, Tulare County,
dated 6-17-83, received 6-23-83, has been examined in conjunction with records filed in this office, and we have determined that all of the requirements of this Division have been fulfilled.

121

EAW/vk
Bond No. 5053092
Dated 5/16/83

S. CORDOVA, ACTING CHIEF
State Oil and Gas Supervisor
By A.G. Hluza, Deputy Supervisor

OG159 (11-76—GSR1—8M)

A.P.I.# 107-20198

RECORDS RECEIVED

DATE RECEIVED 6-23-83
Well Summary (Form OG100) ✓
History (Form OG103) ✓
Core Record (Form OG101)
Elec. Log ✓
Sidewall Samples
Directional Survey (Also enter below)
Other mud

-0-0-0-

ENGINEER'S CHECK LIST

1. Summary, History, & Core (dups) ✓
2. Elec.Log & others (dups) ✓
3. Operator's Name ✓
4. Well Designation ✓
5. Signature ✓
6. Location ✓
7. Elevation ✓
8. Notices ✓
9. "T" Reports ✓
10. Casing Record ✓
11. Plugs ✓
12. Surface Inspection
13. Interpretive Data ✓
14. Production:
    Date of Initial Production
    Date of Approved 6-months Production
15. Drill Cards

-0-0-0-

CLERICAL CHECK LIST

(Date & initial)

1. Form OGD 121 7/12/83 MK
2. Form OG 159 (Final Letter) 7/12/83 MK
3. Form OGD 150 (Release of Bond) 7-14-83

-0-0-0-

DIRECTIONAL SURVEY

-0-0-0-

MAP & BOOK

Map # W4-3 Date of Entry 7/15/83 Engr. MD

-0-0-0-

E.D.P. CLERK

Clerk Date

CONFIDENTIAL CLERK

Clerk Date

HOLD FOR

Engr. RB

-0-0-0-

RECORDS APPROVED JDC (Engr.) Date 7/11/83

-0-0-0-

REVIEW

-0-0-0-

BOND NO. 5053092 Dated 5-16-83

Date eligible for release 7-8-83

(Use date of receipt of last requirement, e.g., records, E-log, environ.inspect. etc.)

-0-0-0-

STATUS & DATE

(Use date of: initial production, injection, disposal, determination of "idle", placing of surface plug, or completed observation.)

Completed Date

Idle Date

Abandoned DRY HOLE Date 5-30-83

Dry Hole	Observation
Drilling	Oil (or Gas) converted to observation
Oil	
Gas	
Gas-open to oil zone	Dual oil and water flood source
Water disposal	steam flood
Oil (or Gas) converted to water disposal	water flood
	fire flood
Storage-air (or -gas)	gas injection
Gas (or Oil) converted to gas storage	miscible injection
	CO_2 injection
Water flood	gas
Steam flood	water disposal
Fire flood	observation
Gas injection	Dual gas and water flood source
CO_2 injection	steam flood
Miscible injection	water flood
Water flood source	fire flood
Oil (or Gas) converted to water flood source	miscible injection
	CO_2 injection
	water disposal
	observation

Recompletion (dated)

-0-0-0-

APPROVAL FOR FINAL LETTER

Date 7/11/83

(9-04-81)

Form OG100 (7/79)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

RECEIVED
JUN 23 1983
DIVISION OF OIL & GAS
BAKERSFIELD

API No. 107-20198

WELL SUMMARY REPORT

Operator	Well
WESTERN CONTINENTAL OPERATING CO.	'Stockdale-Carlisle' 1

Field	County	Sec.	T.	R.	B.&M.
Ducor Area	Tulare	29	23S	27E	MD

Location (Give surface location from property or section corner, street center line and/or California coordinates)
350'N & 150'E fm SW COR SEC 29 T23S R27E MDB&M

Elevation of ground above sea level
585

Commenced drilling (date): 5/23/83
Completed drilling (date): 5/29/83
Commenced producing (date):
☐ Flowing ☐ Pumping ☐ Gas lift
Name of producing zone(s):

Total depth: (1st hole) 3028' (2nd) (3rd)

Present effective depth:

Junk: NONE

Depth measurements taken from top of: ☐ Derrick Floor ☐ Rotary Table ☒ Kelly Bushing
Which is 10.0 feet above ground

GEOLOGICAL MARKERS	DEPTH
Top Santa Margarita	1650'
Pyramid Hills Form.	2366'
Vedder	2506'
Basement Schist	2710'

Formation and age at total depth: SCHIST;JURASSIC

	Clean Oil (bbl per day)	Gravity Clean Oil	Percent Water including emulsion	Gas (Mcf per day)	Tubing Pressure	Casing Pressure
Initial Production		ABANDONED				
Production After 30 days						

CASING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)
10-3/4"	10.0'	352'	32.3#	H40;Smls	NEW	14-3/4"	293	-

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

Was the well directionally drilled? If yes, show coordinates at total depth
☐ Yes ☒ No

Electricol log depths
3022'-352'

Other surveys
NONE

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Name	Title
GEORGE LAPERLE	AGENT/PRESIDENT

Address	City	Zip Code
1400 EASTON DRIVE, SUITE 141	BAKERSFIELD	93309

Telephone Number	Signature	Date
(805) 327-1324	George L. Laperle	June 17, 1983

SUBMIT IN DUPLICATE

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

RECEIVED
JUN 23 1983
DIVISION OF OIL & GAS
BAKERSFIELD

History of Oil or Gas Well

Operator WESTERN CONTINENTAL OPER. CO. Field DUCOR AREA County TULARE
Well 'Stockdale-Carlisle' 1 Sec 29, T 23S, R 27E MD B. & M.
A.P.I. No. 107-20198 Name GEORGE LAPERLE (Person submitting report) Title PRESIDENT (President, Secretary or Agent)
Date JUNE 15, 1983

Signature George Laperle

1400 EASTON DRIVE, SUITE 141; BAKERSFIELD, CA 93309 (Address) (805) 327-1324 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

This well was drilled by PAUL GRAHAM DRILLING CO. using Rig #1. All depth measurements were taken from the KB 10.0' above ground elevation.

****

05-23-83	Moved in equipment and rigged up. Spudded 14-3/4" hole at 7:30 PM. Drilled to 256'.
05-24-83	Drilled 14-3/4" hole to 352'. DEVIATION: 0°00' @ 352'. MUD: 65 pcf; 38 sec; 9.0 cc. Ran 9 joints, 355' on hook, 10-3/4" OD, 40.5#, H40, ST&C casing equipped with 1 centralizer on shoe joint. Cemented regular guide shoe at 352' with 100 cuft 1:1 POZMIX/Class 'G' cement premixed w/2% gel followed by 193 cuft Class 'G' cement pre-treated w/3% $CaCl_2$. Good cement returns. Cement in place at 7:50 AM. Cut off and landed 10-3/4" casing and installed slip-on and weld 10" x 3000 psi casing flange and tested weld to 3000 psi - OK. Installed 3M10"RRA BOPE stack and choke and kill lines and tested to DOG specifications. Drilled out cement and shoe. Installed ENERGYLOG mud logging equipment.
05-25-83	Drilled 9-7/8" hole to 1538'. DEVIATION: 0°15' @ 1296'. MUD: 70 pcf; 39 sec; 9.00 cc.
05-26-83	Drilled 9-7/8" hole to 2394'. DEVIATION: 1°00' @ 1850'. MUD: 69 pcf; 41 sec; 8.8 cc.
05-27-83	Drilled 9-7/8" hole to 2780'. Reduced bit size and BHA and drilled 7-7/8" hole to 2932'. MUD: 70 pcf; 39 sec; 7.0 cc.
05-28-83	Drilled 7-7/8" hole to 3028'. MUD: 71 pcf; 40 sec; 6.6 cc.
05-29-83	Drilled 7-7/8" hole to 3028'. Ran SCHLUMBERGER DIL/SFL log from 3022' to 352'.
05-30-83	With open-ended drill pipe at 396' equalized 73 cuft Class 'G' cement w/3% $CaCl_2$. Cement in place at 11:10 AM. Located top of hard cement at 306' at 2:00 PM. DOG witnessed and approved. Placed 25' cement plug at surface. Recovered casing flange and welded steel plate over stub of 10-3/4" OD casing and abandoned well. Rig released at 9:00 PM.

BIT RECORD

OPERATOR: WESTERN CONTINENTAL OPER. CO.
WELL NAME & NO: 'Stockdale-Carlisle' 1
LOCATION: Sec 29 T23S R27E MDB&M
COUNTY: Tulare
CONTRACTOR: Paul Graham

RIG NO: 1
PUMP: OPI Triplex
MUD TYPE: Multiplex
SPUD DATE: 5-23-83
UNDER SURFACE: 5-24-83

TOTAL DEPTH: 3,028'
COLLARS: 7"
HEVI-WT PIPE:
DRILL PIPE: 3-1/2"
DRILL PIPE:

RUN #	SIZE in	MAKE	TYPE	SERIAL #	JETS 1	JETS 2	JETS 3	DEPTH OUT	FEET DRLD	BIT HOURS	FT/ HR	CUMUL HOURS	WT Mlbs	RPM	PUMP psi	COND T/B/G	REMARKS
1	14-3/4	REED	Y11J	420424	12	12	12	352	312	7.25	43.0	7.25	10	120	800	2 2 I	
2	9-7/8	SMITH	FDT	CK1598	10	10	10	770	418	7.00	59.7	14.25	15	100	1100	3 2 I	
3	9-7/8	SEC	S3SJ	296066	12	12	12	1850	1080	16.50	65.5	30.75	15	110	1950	2 2 I	
4	9-7/8	SEC	S3SJ	287334	12	12	12	2705	855	23.50	36.4	54.25	15	100	1900	5 4 I	
5	9-7/8	SEC	S3J	287339	12	12	12	2781	76	5.75	13.2	60.00	15	110	1900	2 2 I	
6	7-7/8	SEC	S3J	269304	11	12	12	2887	106	10.50	10.1	70.50	15	80	1800	6 4 I	
7	7-7/8	SEC	S3J	296281	12	12	12	2941	54	10.25	5.3	80.75	15	90	1800	6 6 I	
8	7-7/8	SEC	M4NJ	270992	11	11	11	3028	87	15.75	5.5	96.50	15	80	1800	5 5 I	

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

No. T 483-658

DIVISION OF OIL AND GAS

Report on Operations

Mr. George R. LaPerle
WESTERN CONTINENTAL OPERATING COMPANY
1400 Easton Drive, Suite #141
Bakersfield, CA 93309

Bakersfield, Calif.
June 24, 1983

Your operations at well "Stockdale-Carlisle" 1, API No. 107-20198, Sec. 29, T23S R.27E, M.D. B.& M. ---- Field, in Tulare County, were witnessed on 5-30-83 by Mr. Reed Bowles, representative of the supervisor, was present from 1300 to 1700. There were also present Mr. Gary Hodace, Engineer.

Present condition of well: 10 3/4" cem. 353'. T.D. 3028'. Plugged w/cem. 396' - 306', 50' - 5'.

The operations were performed for the purpose of abandonment.

DECISION: **THE PLUGGING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.**

ENV. OK
7/8/83
DL

RB/tn

S. CORDOVA, ACTING CHIEF

By A. G. Hluza
Deputy Supervisor

A. G. Hluza

OG109(12-80-15M)

658

DIVISION OF OIL AND GAS
~~Cementing~~/Plugging Memo

Operator WESTERN CONTINENTAL OPERATING Co Well No. "STOCKDALE-CARLISLE" 1
API No. 107-20198 Sec. 29, T. 23S, R. 27E, MD B&M
Field —, County TULARE. On 5-30-83,
Mr. REED BOWLES, representative of the supervisor was present from 1300 to 1700.
There were also present GARY HODAGE, ENGINEER
Casing record of well: 10 3/4" @ 353', TD 3028', PLUGGED
W/ CEMENT 396-306, 50-5'.

The operations were performed for the purpose of D-1

☒ The plugging/~~cementing~~ operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @_____' is approved.

Hole size:_____" fr._____' to_____', _____" to_____' & _____" to_____'

Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			

Casing/tubing recovered:_____" shot/cut at_____', _____', _____' pulled fr._____';
_____" shot/cut at_____', _____', _____' pulled fr._____'.

Junk (in hole):_____

Hole fluid (bailed to) at_____'. Witnessed by_____

Mudding	Date	Bbls.	Displaced	Poured	Fill	Engr.

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
5/30	72 cf	DP 396	—	Rptd	306	DP	5/30, 1400	RB
~	20 cf	DP 50	1530	RB	5	DP	5/30 1630	RB

ENV. OK 7/8/83 ☒

OGD10 (11/81/GSR1/5M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

No. P 483-2949

REPORT ON PROPOSED OPERATIONS

000 (field code)
-- (area code)
-- (new pool code)
-- (old pool code)

G. R. LaPerle
WESTERN CONTINENTAL OPERATING CO.
1400 Easton Drive, Suite 141
Bakersfield, Ca. 93309

Bakersfield, California
June 22, 1983

Your ____ proposal to abandon well "Stockdale-Carlisle" 1,
A.P.I. No. 107-20198, Section 29, T. 23S, R. 27E, M.D. B. & M.,
-- field, -- area, -- pool,
Tulare County, dated 6/15/83, received 6/20/83 has been examined in conjunction with records filed in this office.

DECISION: THE PROPOSAL, COVERING WORK ALREADY COMPLETED IN ACCORDANCE WITH PRIOR AGREEMENT, IS APPROVED.

NOTE: THIS DIVISION SHALL BE NOTIFIED to inspect the cleaned-up well site before final approval of abandonment will be issued.

DT:nj
Bond #5053092
Dtd: 5/16/83

S. Cordova, Acting Chief

By _____
Deputy Supervisor

A copy of this report and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

OG111 (11/82/DWRR/5M)

Abd
Dry Hole
DT

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

RECEIVED
JUN 20 1983
DIVISION OF OIL & GAS
BAKERSFIELD

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin.

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS	
		OGD114	OGD121
	505392 #05/16/83	83-26	

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon Well No. "Stockdale-Carlisle" 1, API No. 107-20198, Sec. 29, T. 23S, R. 27E, MD B. & M., _____ Field, Tulare County, commencing work on May 30, 1983.

The present condition of the well is:

1. Total depth: 3,028'

2. Complete casing record, including plugs and perforations:
10-3/4" OD, 40.5#, H40, ST&C cmtd w/ 293 cuft cmt

3. Last produced _____ Never _____
(Date) (Oil, B/D) (Gas, Mcf/D) (Water, B/D)

or

4. Last injected _____ Never _____
(Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional data for dry hole (show depths)

5. Oil or gas shows
None

6. Stratigraphic markers:
None

7. Formation and age at total depth: Jurassic, Schist

8. Base of fresh water sands: None

The proposed work is as follows:

1. With open-ended drill pipe at 396' equalize 90' cement plug across 10-3/4" casing shoe. Locate cement plug and test for hardness.
2. Place 25' cement plug at surface.
3. Recover casing flange and weld steel plate over stub of 10-3/4" and abandon well.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 1400 Easton Drive (Street)
Bakersfield (City) CA (State) 93309 (Zip)
Telephone Number (805) 327-1324 (Area Code) (Number)

Western Continental Operating Company (Name of Operator)
By [signature] (Signature) 6/15/83 (Date)
Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

OG108 (8-75—GSRI—15M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

No. P 483-2345

REPORT ON PROPOSED OPERATIONS

000 (field code)
00 (area code)
00 (new pool code)
-- (old pool code)

G. R. LaPerle
WESTERN CONTINENTAL OPERATING CO.
1400 Easton Drinve, Suite 141
Bakersfield, Ca. 93309

Bakersfield, California
May 19, 1983

Your proposal to drill well "Stockdale-Carlisle" 1,
A.P.I. No. 107-20198, Section 29, T. 23S, R. 27E, M.D. B. & M.,
-- field, -- area, -- pool,
Tulare County, dated 5/16/83, received 5/17/83 has been examined in conjunction with records filed in this office.

DECISION: THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Drilling fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.

2. Sufficient cement shall be pumped back of the 10 3/4" casing to fill to the surface.

3. The specified blowout prevention equipment is ocnsidered minimal and shall be installed and maintained in operating condition at all times. D.O.G. Class II, A.P.I. Class II 2MA, RR or RA and D.O.G. Class A hoel fluid monitoring equipment.

4. Sufficient cement shall be used to fill the annular space behind the 7" casing to at least 500' above oil and gas zones and excessive pressure intervals and to at least 100' above the base of fresh water.

NOTE: The Division will monitor the monthly production of this well for a period of six months, and if anomalous water production is indicated, remedial action will be ordered.

WFW:nj
Bond #5053092
Dated: 5/16/83

S. Cordova, Acting Chief

By _____
Deputy Supervisor

A copy of this report and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

OG111 (10/DWRR/5M)

"E. any area no pool wgn

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

RECEIVED
MAY 17 1983
DIVISION OF OIL & GAS
BAKERSFIELD

C.E.Q.A. INFORMATION			
EXEMPT ☒ CLASS ____	NEG. DEC. ☐ S.C.H. NO. ____	E.I.R. ☐ S.C.H. NO. ____	DOCUMENT NOT REQUIRED BY LOCAL JURISDICTION ☐
See Reverse Side			

FOR DIVISION USE ONLY					
MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
WH-3	6/1/83	W	5053092 Date 5-16-83	83-21	WC

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well "Stockdale-Carlisle" #1, API No. 107-20198 (Assigned by Division),

Sec. 29, T. 23S, R. 27E, M.D.B. & M., ____ Field, Tulare County.

Legal description of mineral-right lease, consisting of 215 acres, is as follows: The southwest quarter of Section 29 and the west half of the southeast quarter Section 29, T23S, R27E. (Attach map or plat to scale)

Do mineral and surface leases coincide? Yes X No ____. If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

EDP 5-18-83 gs.

Location of well 350 feet North (Direction) along section / ~~property~~ (Cross out one) line and 150 feet East (Direction)

at right angles to said line from the Southwest corner of section / ~~property~~ (Cross out one) 29 or T23S, R27E, M.D.B.& M.

Is this a critical well according to the definition on the reverse side of this form? Yes ☐ No ☒

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth: ____ feet (Direction) and ____ feet (Direction)

Elevation of ground above sea level 585 feet.

All depth measurements taken from top of Kelly Bushing (Derrick Floor, Rotary Table, or Kelly Bushing) that is 10 feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES API	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS	CALCULATED FILL BEHIND CASING (Linear Feet)
10-3/4"	32.75	H40, ST&C	Surface	350	350	300 Cu. Ft.
7"	17	K55, ST&C	Surface	3200	3200	1200 Cu. Ft.
5-1/2"	17	K55, Liner	3150	3500		

(A complete drilling program is preferred and may be submitted in lieu of the above program.)

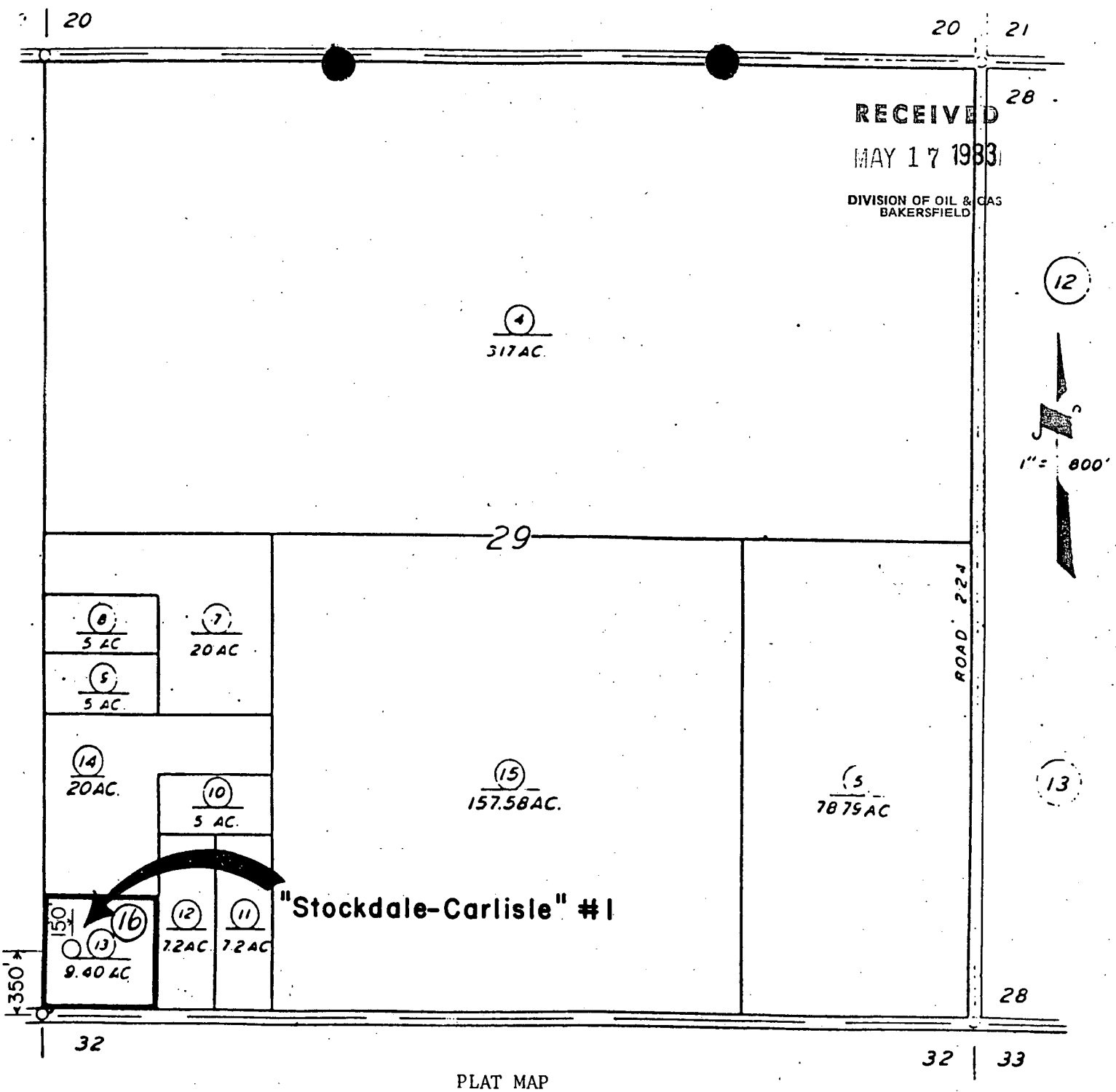
Intended zone(s) of completion Jurassic Fractured Schist 1600 psi (Name, depth, and expected pressure) Estimated total depth 3500

It is understood that if changes in this plan become necessary we are to notify you immediately.

Name of Operator	Type of Organization (Corporation, Partnership, Individual, etc.)	
Western Continental Operating Company	Corporation	
Address 1400 Easton Drive, Suite 141	**City** Bakersfield	**Zip Code** 93309
Telephone Number (805) 327-1324	**Name of Person Filing Notice** George R. LaPerle	**Signature** George R. LaPerle / **Date** 5-16-83

This notice and indemnity or cash bond shall be filed, and approval given, before drilling begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

OG105 (3/82/GSR1/10M)



PLAT MAP

Section 29, T23S-R27E, MDB&M, Tulare County, California

Well Name: "Stockdale-Carlisle" #1

Location: 350' North and 150' East of the SW 1/4 Corner Section 29

Elevation: 585' Ground; 595' K.B.

Lease: Marie Carlisle, as Trustee, Lessor, 215 Acres, more or less: The Southwest Quarter and the West Half of the Southeast Quarter Section 29

WESTERN CONTINENTAL OPERATING COMPANY
1400 EASTON DRIVE, SUITE 141
BAKERSFIELD, CALIFORNIA 93309
TELEPHONE (805) 327-1324

RECEIVED
MAY 17 1983
DIVISION OF OIL & GAS
BAKERSFIELD

May 16, 1983

Division of Oil & Gas
4800 Stockdale Highway, Suite 417
Bakersfield, California 93309

Atten: Mr. A. G. Hluza, Deputy Supervisor

Re: Transmittal: Notice of Intention to Drill New Well "Stockdale-Carlisle" #1, Section 29-T23S-R27E, Tulare County, California

Dear Al:

Enclosed for your further processing is Western's Notice of Intention to Drill New Well (Form OG105) together with Plat Map, Individual Drilling Bond #5053092, and copy of Special Use Permit issued by the Tulare County Planning Department and recorded 5-9-83 as Instrument #21069, Book 4066, Page 456, Official Records, Tulare County, California, for the above referenced well.

Very truly yours,

George R. LaPerle

GRL:dee3:dog4

Enclosures

cc: Marlan Shepard (with copies enclosures)

APPENDIX H
STORMWATER ANALYSIS

Westwood

12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343

Main (952) 937-5150
Fax (952) 937-5822

westwoodps.com
(888) 937-5150

MEMORANDUM

Date: December 30, 2019

Re: Rexford Solar Project – Stormwater Analysis
File 0024366

To: Venai Shenoy, 8Minute Solar Energy

From: Westwood Professional Services

This memo documents delivery of the desktop hydrology study for the Rexford Solar Project.

I: Site Location Information

The project site is a proposed solar electrical generating facility just south of the City of Ducor in Tulare County, California. The coordinates of the site are in the area surrounding 35.859320, -119.047961. This version of the analysis includes the updated boundary. A 320-acre area was added to the northeast.

II. Summary of Hydrologic Conditions

The 100-year, 24-hour rainfall depth for this area is 3.87 inches according to NOAA Atlas-14[1] and can be seen in Attachment A. Based on the USGS 10-m resolution DEM, the drainage area that encompasses the project site (on and off-site) is approximately 232 square miles and flows from the east to west across the different parcels.

The project parcels are adjacent to the White River and are currently used for irrigated agriculture. The soils in the area are predominantly in Hydrologic Soil Group C. [2] These soils are generally clays and silts that have low infiltration capacity, which means more runoff during storms. The ground is fairly level with slopes in the 0.5% to 3% range. NWI wetlands present on site mostly follow intermittent streams.[3]

The proposed site sits within the jurisdictional boundaries of several water districts. These include the Ducor Irrigation District, the Ducor Community Services District, and the Kern-Tulare Water District. The State of California and Tulare County also have jurisdiction over construction projects at this location.

The main risk factor to the proposed project is flooding along the White River. Proposed areas that are not adjacent to the White River may also see flooding but from much smaller drainage areas.

III: FEMA Flood Mapping

FEMA delineated a Zone A floodplain that touches the proposed project in two areas.[4] The proposed site appears on two FEMA FIRM panels: 06107C1978E and 06107C2325E. A Zone A floodplain has no flood elevation associated with it but is rather an area that, in FEMA's calculations, would likely be effected by a 100-year flood of the White River or its tributaries. The design of the solar array should take the floodplain into account.

IV: Recommended Future Studies

Based on the information above, the project site appears to experience minor to moderate hydrologic risk, depending on the final infrastructure locations chosen for development. The majority of the site has very low risk: it is not in a floodplain and only runoff from a small area drains through it. If the project continues to construction, a detailed hydrologic study is recommended. If overland flows are found to be prevalent, the site should be modeled with FLO-2D to determine velocities onsite along with flood and scour depths.

Final design of the site will meet state NPDES and county stormwater requirements.

References

1. Precipitation Frequency Data Server, Atlas 14, National Oceanic and Atmospheric Administration. Available online at http://hdsc.nws.noaa.gov/hdsc/pfds/. Accessed October 2019.
2. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed October 2019.
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Attachment A

NOAA Atlas 14, Volume 6, Version 2
Location name: Pixley, California, USA*
Latitude: 35.8649°, Longitude: -119.039°
Elevation: 515.9 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.079** (0.067-0.093)	**0.102** (0.087-0.121)	**0.134** (0.114-0.160)	**0.163** (0.137-0.195)	**0.204** (0.165-0.255)	**0.238** (0.187-0.305)	**0.275** (0.210-0.363)	**0.315** (0.233-0.431)	**0.375** (0.264-0.538)	**0.424** (0.287-0.634)
10-min	**0.113** (0.096-0.133)	**0.146** (0.125-0.173)	**0.193** (0.164-0.229)	**0.233** (0.196-0.280)	**0.292** (0.236-0.365)	**0.341** (0.269-0.437)	**0.394** (0.301-0.520)	**0.452** (0.334-0.617)	**0.537** (0.378-0.771)	**0.608** (0.411-0.909)
15-min	**0.136** (0.117-0.161)	**0.177** (0.151-0.209)	**0.233** (0.198-0.277)	**0.282** (0.237-0.338)	**0.353** (0.286-0.442)	**0.412** (0.325-0.529)	**0.476** (0.364-0.629)	**0.546** (0.404-0.746)	**0.649** (0.457-0.932)	**0.735** (0.497-1.10)
30-min	**0.187** (0.160-0.221)	**0.242** (0.207-0.287)	**0.320** (0.272-0.380)	**0.387** (0.326-0.464)	**0.485** (0.392-0.606)	**0.566** (0.446-0.725)	**0.653** (0.500-0.863)	**0.749** (0.554-1.02)	**0.890** (0.626-1.28)	**1.01** (0.681-1.51)
60-min	**0.260** (0.223-0.308)	**0.337** (0.288-0.399)	**0.445** (0.378-0.528)	**0.538** (0.453-0.646)	**0.674** (0.545-0.843)	**0.787** (0.620-1.01)	**0.909** (0.695-1.20)	**1.04** (0.771-1.42)	**1.24** (0.872-1.78)	**1.40** (0.948-2.10)
2-hr	**0.385** (0.329-0.455)	**0.490** (0.418-0.580)	**0.638** (0.543-0.758)	**0.768** (0.646-0.921)	**0.958** (0.774-1.20)	**1.12** (0.880-1.43)	**1.29** (0.986-1.70)	**1.48** (1.09-2.02)	**1.76** (1.24-2.52)	**1.99** (1.34-2.98)
3-hr	**0.476** (0.407-0.562)	**0.602** (0.513-0.712)	**0.780** (0.664-0.927)	**0.937** (0.789-1.12)	**1.17** (0.944-1.46)	**1.36** (1.07-1.74)	**1.57** (1.20-2.07)	**1.80** (1.33-2.46)	**2.14** (1.51-3.07)	**2.42** (1.64-3.63)
6-hr	**0.657** (0.561-0.776)	**0.828** (0.706-0.980)	**1.07** (0.911-1.27)	**1.28** (1.08-1.54)	**1.60** (1.29-2.00)	**1.86** (1.47-2.39)	**2.15** (1.64-2.83)	**2.46** (1.82-3.36)	**2.92** (2.06-4.20)	**3.31** (2.24-4.95)
12-hr	**0.860** (0.735-1.02)	**1.09** (0.933-1.30)	**1.43** (1.21-1.69)	**1.71** (1.44-2.06)	**2.14** (1.73-2.67)	**2.49** (1.96-3.19)	**2.87** (2.20-3.79)	**3.29** (2.44-4.50)	**3.91** (2.75-5.61)	**4.43** (2.99-6.62)
24-hr	**1.12** (1.01-1.26)	**1.44** (1.30-1.63)	**1.90** (1.71-2.15)	**2.29** (2.05-2.62)	**2.87** (2.50-3.38)	**3.35** (2.86-4.01)	**3.87** (3.23-4.73)	**4.44** (3.62-5.56)	**5.28** (4.16-6.85)	**5.99** (4.57-8.00)
2-day	**1.35** (1.22-1.53)	**1.78** (1.60-2.01)	**2.38** (2.14-2.69)	**2.89** (2.58-3.30)	**3.64** (3.16-4.28)	**4.25** (3.63-5.09)	**4.92** (4.11-6.01)	**5.64** (4.60-7.06)	**6.70** (5.27-8.69)	**7.58** (5.79-10.1)
3-day	**1.49** (1.35-1.69)	**1.98** (1.79-2.24)	**2.67** (2.40-3.03)	**3.27** (2.92-3.73)	**4.13** (3.58-4.85)	**4.83** (4.12-5.78)	**5.59** (4.67-6.83)	**6.42** (5.24-8.04)	**7.63** (6.00-9.89)	**8.63** (6.59-11.5)
4-day	**1.61** (1.45-1.82)	**2.15** (1.94-2.43)	**2.91** (2.61-3.30)	**3.56** (3.18-4.06)	**4.50** (3.91-5.29)	**5.28** (4.50-6.31)	**6.11** (5.11-7.46)	**7.02** (5.73-8.78)	**8.34** (6.56-10.8)	**9.43** (7.20-12.6)
7-day	**1.87** (1.69-2.12)	**2.50** (2.25-2.82)	**3.37** (3.04-3.83)	**4.13** (3.69-4.72)	**5.23** (4.54-6.15)	**6.13** (5.23-7.34)	**7.10** (5.93-8.67)	**8.15** (6.64-10.2)	**9.66** (7.60-12.5)	**10.9** (8.34-14.6)
10-day	**2.05** (1.85-2.32)	**2.73** (2.46-3.09)	**3.69** (3.32-4.18)	**4.52** (4.03-5.16)	**5.72** (4.97-6.72)	**6.70** (5.72-8.02)	**7.76** (6.48-9.48)	**8.90** (7.26-11.1)	**10.6** (8.30-13.7)	**11.9** (9.10-15.9)
20-day	**2.56** (2.31-2.90)	**3.41** (3.08-3.86)	**4.62** (4.16-5.24)	**5.66** (5.06-6.47)	**7.18** (6.24-8.44)	**8.42** (7.19-10.1)	**9.75** (8.14-11.9)	**11.2** (9.11-14.0)	**13.2** (10.4-17.1)	**14.9** (11.4-19.9)
30-day	**3.08** (2.78-3.48)	**4.09** (3.69-4.63)	**5.53** (4.97-6.27)	**6.77** (6.05-7.73)	**8.57** (7.45-10.1)	**10.0** (8.56-12.0)	**11.6** (9.68-14.2)	**13.3** (10.8-16.6)	**15.6** (12.3-20.2)	**17.5** (13.4-23.4)
45-day	**3.79** (3.42-4.29)	**5.00** (4.51-5.66)	**6.71** (6.04-7.61)	**8.19** (7.31-9.36)	**10.3** (8.97-12.1)	**12.1** (10.3-14.4)	**13.9** (11.6-17.0)	**15.8** (12.9-19.8)	**18.5** (14.6-24.1)	**20.7** (15.8-27.7)
60-day	**4.45** (4.02-5.03)	**5.82** (5.25-6.59)	**7.76** (6.98-8.80)	**9.42** (8.41-10.8)	**11.8** (10.2-13.9)	**13.7** (11.7-16.4)	**15.7** (13.2-19.2)	**17.9** (14.6-22.3)	**20.8** (16.4-27.0)	**23.1** (17.7-30.9)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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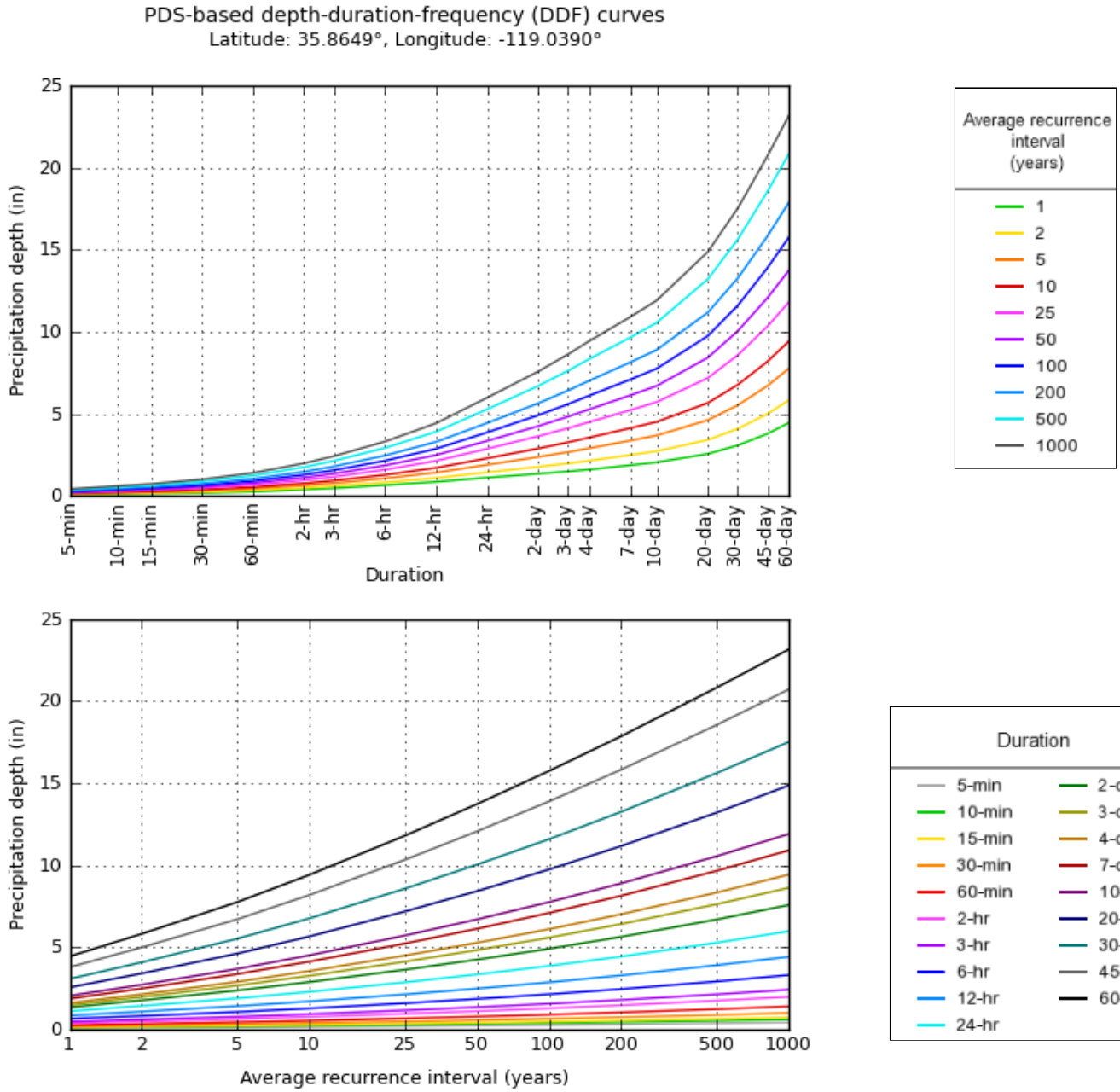
PF graphical



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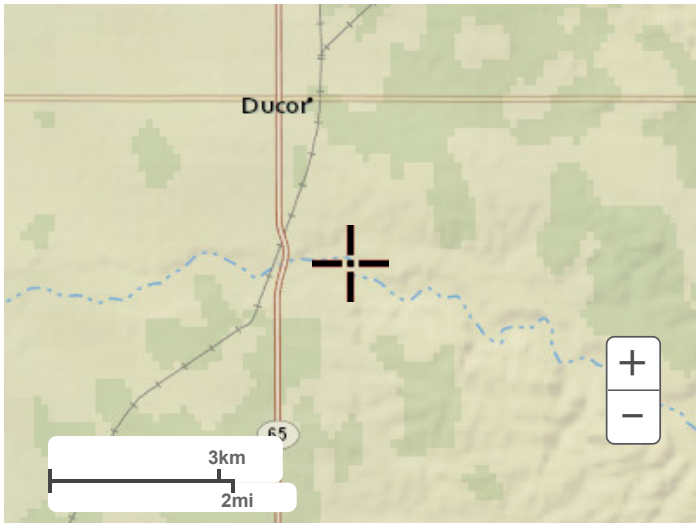
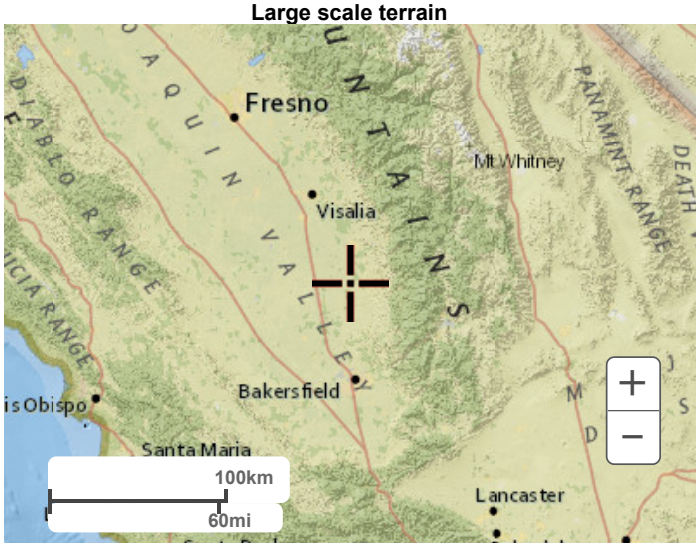
Maps & aerials

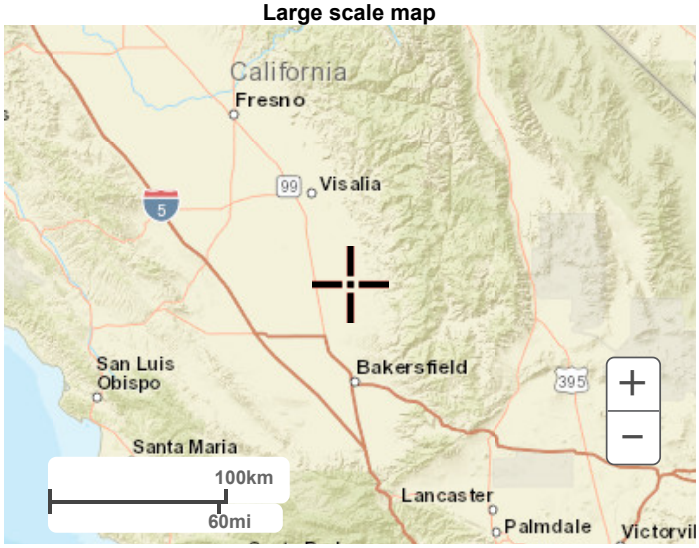
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial

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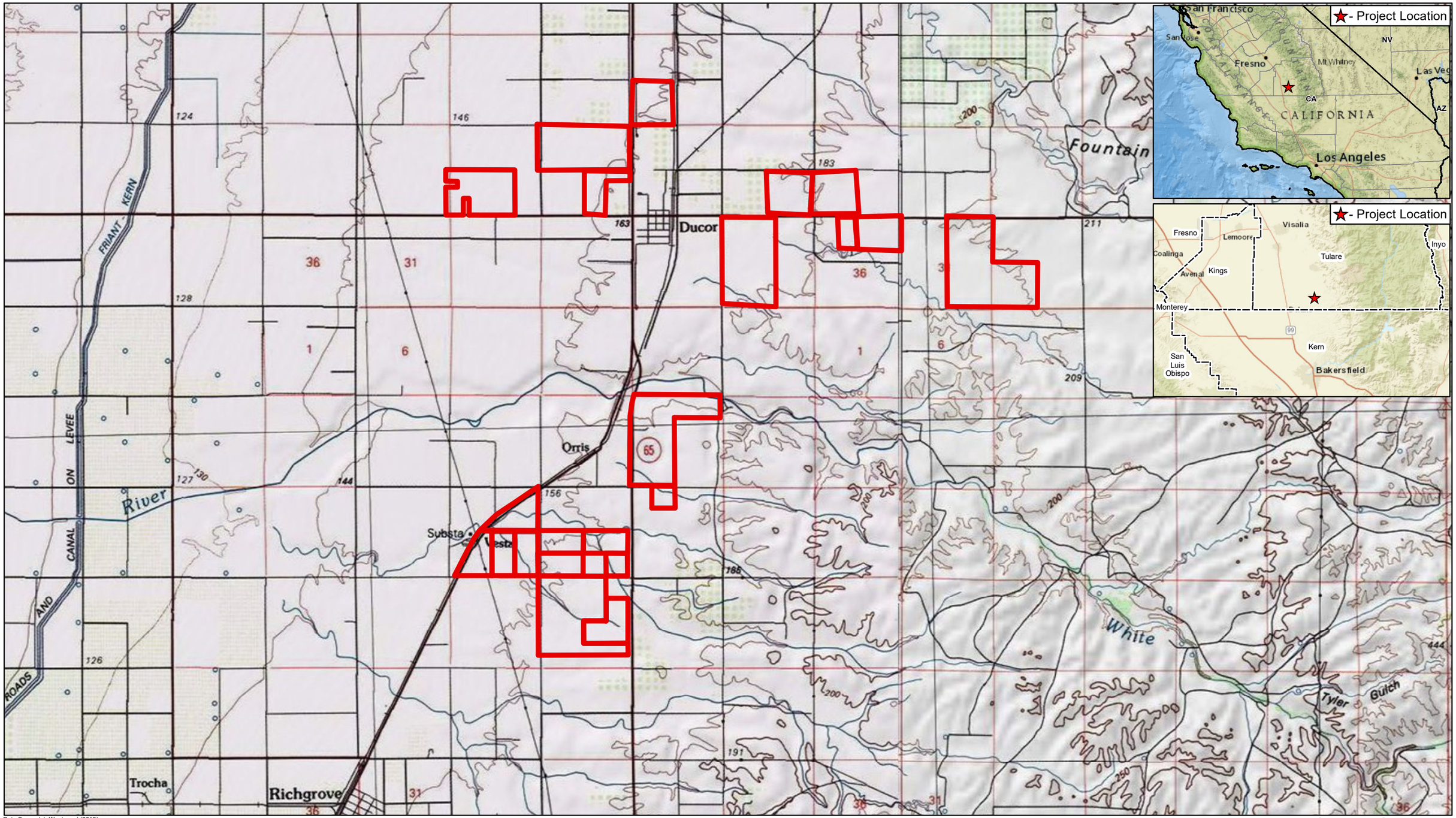

Data Source(s): Westwood (2019); .

Legend

- Project Boundary
- County Boundary

N

0 Miles 1

Rexford Solar

Tulare County, California

Exhibit 1: Phase A Location Map

December 30, 2019

Westwood
Toll Free (888) 937-5150 westwoodps.com
Westwood Professional Services, Inc.

Map Document: N:\0024366.00\GIS\Rexford_Location_exhibitA_191230.mxd 12/30/2019 3:53:48 PM JWFox

Tulare

Kern

Data Source(s): Westwood (2019): .

Legend

- Drainage Area
- Project Boundary
- FEMA Zone A Floodplain
- Water Districts
- HUC-12 Boundary
- County Boundary
- Flow Lines

Wetlands have been delineated along stream lines

N

0 Miles 2

Rexford Solar

Tulare County, California

Exhibit 2: Phase A Base Map

December 30, 2019

Westwood
Toll Free (888) 937-5150 westwoodps.com
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Map Document: N:\0024366.00\GIS\Rexford_EX2_basemap_191230.mxd 12/30/2019 3:40:47 PM JWFox

APPENDIX I
NOISE STUDY

Rexford Solar Farm Project

Noise Study

prepared for

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Los Angeles, California 90036
Contact: Venai Shenoy, Director, Land Entitlement

prepared by

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

January 2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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Tables

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Appendices

1 Project Description

1.1 Introduction

This study analyzes the potential noise impacts of the proposed Rexford Solar Farm Project (Project) located in unincorporated Tulare County. Rincon Consultants, Inc. (Rincon) prepared this study under contract to 8minute Solar Energy, LLC for use by Tulare County, the lead agency. The study evaluates the short- and long-term impacts of the Project to noise-sensitive receivers.

1.2 Project Site and Description

The Project is located in unincorporated Tulare County, near the community of Ducor. The area is a relatively flat agricultural landscape. The majority of the Project is bisected by State Route (SR) 65. Parcels are also located off Richgrove Drive and Avenue 56. The Project comprises 42 assessor's parcels (Project Area) totaling approximately 3,620 gross acres. The permanent disturbance acreage associated with development of the solar facility and associated infrastructure (Project Site) within the Project Area would be less than the gross acreage of the Project Area. Figure 1 and Figure 2 show the regional location and immediate vicinity of the Project Area, respectively.

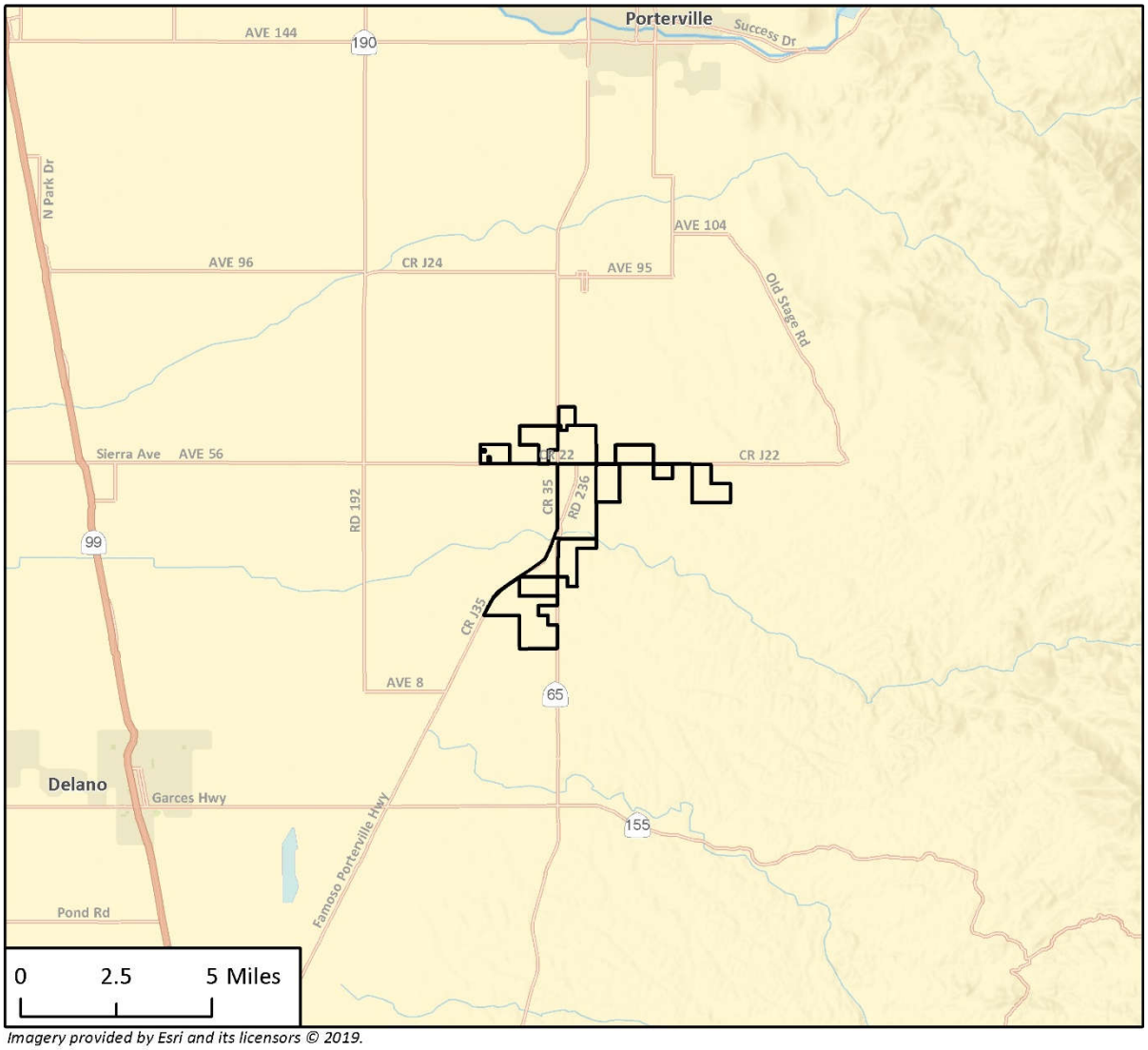
This Project description is abbreviated, focusing on elements of the proposed solar facility that are most relevant for the noise analysis. On the parcels, the Project would use solar photovoltaic (PV) panels or modules on mounting frameworks to convert sunlight directly into electricity. This electricity would be delivered from the panels to inverter stations, where the electricity would be converted from direct current (DC) to alternating current (AC). Each parcel may also include an operations and maintenance (O&M) building, substations, energy storage systems, and/or transmission facilities, as necessary. In addition to the solar PV sites, the Project would include a gen-tie corridor to deliver power from the solar facility to the electrical grid. This corridor would run to the Southern California Edison Vestal Substation via an overhead and/or underground generation tie line (gen-tie).

1.3 Construction Activities

Construction of all Project components would occur over approximately 12 to 24 months beginning as early as the fourth quarter of 2021 (i.e., October 1, 2021). Construction of the Project would include the following types of activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Collector line installation
- Architecture and landscaping

Figure 1 Regional Location



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Project Area

N

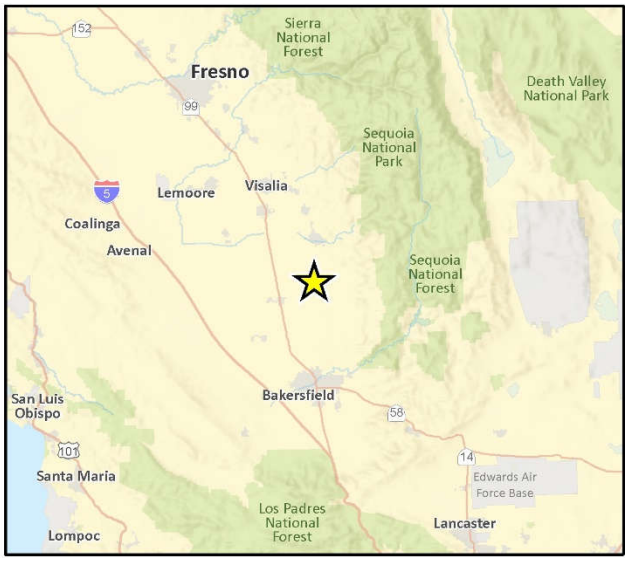

Fig 1 Regional Location

Figure 2 Project Location

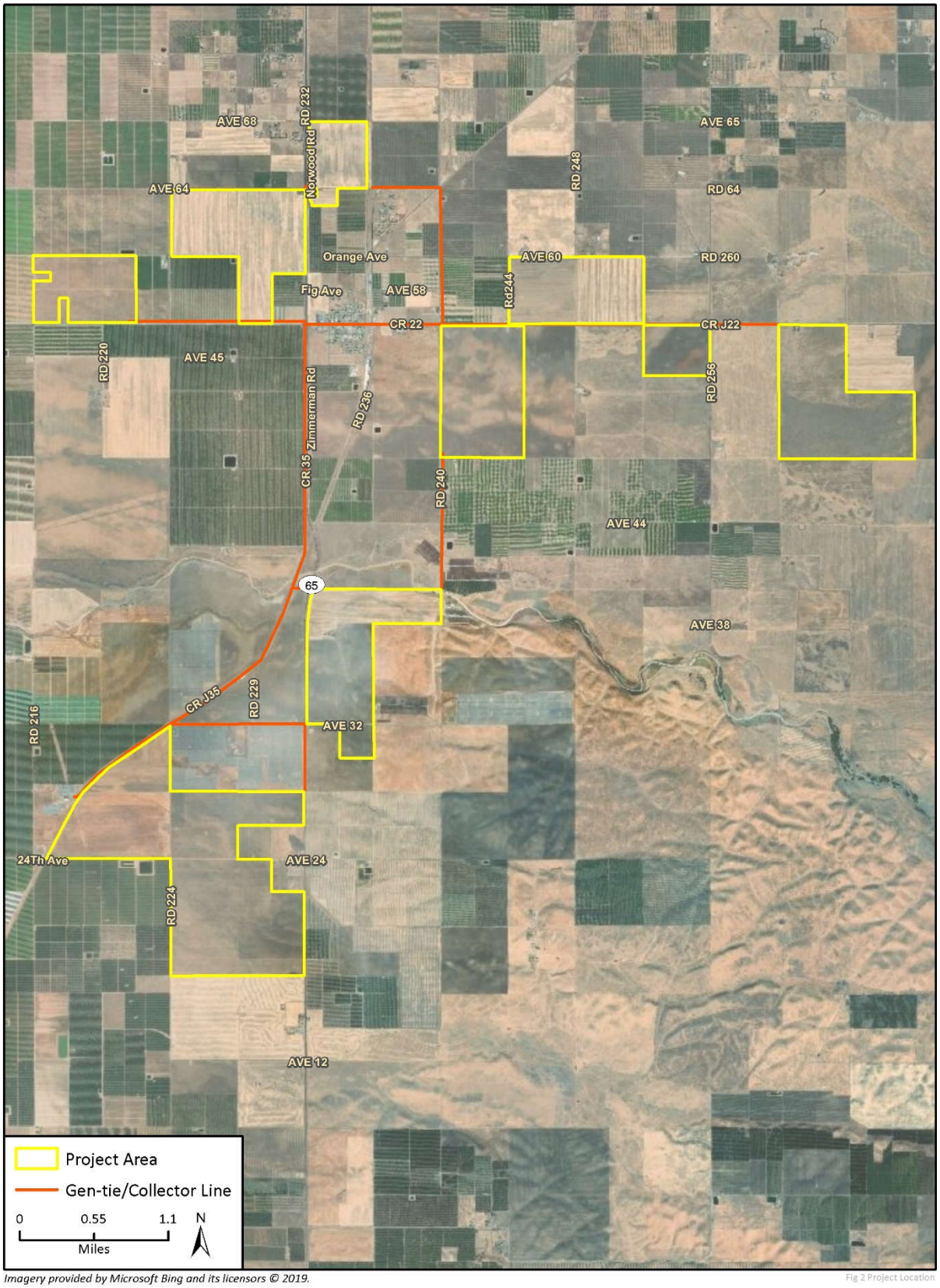

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Fig 2 Project Location

Each Project parcel may be constructed simultaneously and phases of construction would overlap.

Table 1 shows the construction schedule, number of workdays, and overlapping phases that were assumed in the following analysis.

Table 1 Overall Project Construction Schedule

Phase	Work Days	Month 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Phase 1: Site preparation & Grading	86															
Phase 2: Tracker Foundations (Piles)	150															
Phase 3: Underground Cabling	150															
Phase 4: Mechanical Installation	175															
Phase 5: Electrical Installation	200															

Construction traffic would primarily access the Project from State Route 65, and may also utilize County roads. It is estimated that up to 1,000 workers per day (during peak construction periods) would be required during the construction of the Project. On-road traffic would consist of employee and vendor vehicle trips. The number of vehicle trips would vary by month depending on the construction activities.

Heavy construction is expected to occur between 6:00 AM and 5:00 PM, Monday through Friday. Additional hours may be necessary to make-up schedule deficiencies or to complete critical construction activities. Some activities may continue 24 hours per day, seven days per week. Nighttime activities could include, but are not limited to, refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning.

Materials and supplies would be delivered to the Project Site by truck. Truck deliveries would normally occur during daylight hours. However, there could be offloading and/or transporting of materials to the Project Site on weekends and during evening hours.

Earthmoving activities are expected to be limited to the construction of access roads, O&M buildings, substations, energy storage systems, and storm water protection or storage (detention) facilities. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas.

1.4 Operational Activities

Once completed, the Project would generally be limited to the following maintenance activities:

- Cleaning PV panels
- Monitoring electricity generation
- Providing site security
- Maintaining the facility: replacing or repairing inverters, wiring, and PV modules

The Project would operate continuously, seven days a week, until the anticipated repowering or decommissioning of the Project in 30 to 40 years. It is expected that the Project would require an operational staff of up to 20 full-time employees. The Project may share an O&M, substation, and/or transmission facilities with one or more nearby energy projects, which could reduce the proposed Project's on-site operational staff. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available.

2 Background

2.1 Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013a).

In technical terms, sound levels are described as either a "sound power level" or a "sound pressure level," which while easily confused are two distinct characteristics of sound. Both share the same unit of measure, the decibel (dB). However, the sound power level, expressed as L_w, is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave in the air that exerts pressure on receivers such as an eardrum or microphone, the SPL. Sound measurement instruments only measure SPL, and limits used in standards are generally SPL. Modeling uses the L_w of equipment to calculate the SPL at a distance.

Noise levels are commonly measured in dB using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud ([10.5x the sound energy] Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013a). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013a). Noise levels may also be reduced by

intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2017). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of Project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The relationship between the peak-hour L_{eq} value and the L_{dn} depends on the distribution of traffic during the day, evening, and night.

2.2 Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the

propagation of vibration over long distances (Caltrans 2013b). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in./sec.). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2013b).

2.3 Existing Project Area Noise Levels

The Project Site is located in a rural agricultural environment with mostly agricultural uses, and a small cluster of single-family residences and commercial uses in the community of Ducor. The primary sources of noise on-site and in the surrounding area include motor vehicles, wind, and agricultural activities (e.g., farming equipment). The greatest vehicle noise would occur from vehicles on the main thoroughfares (SR 65 and Avenue 56).

To evaluate existing noise levels in the area, four 15-minute noise measurements (ST1 through ST4) were taken on and near the Project Site on October 8, 2019, using an ANSI Type II integrating sound level meter. Figure 3 shows the locations of the noise measurements. The noise measurement locations were chosen to provide a representative range of ambient noise levels across the Project Site and in the nearby area, especially near existing noise-sensitive residences and roadways. The short-term noise measurement results are shown in Table 2. Detailed noise meter outputs are included in Appendix A.

Table 2 Noise Monitoring Results in the Project Site Vicinity – Short Term

Measurement Number	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Noise Level (dBA L_{eq})[1]
1	In between SR 65 and Road 232	2:07 PM – 2:22 PM	90 feet from centerline of SR 65	67
2	Avenue 56 and Road 236 intersection (Ducor)	1:09 PM – 1:24 PM	80 feet from centerline of Avenue 56	63
3	Road 240, near Avenue 48 intersection	1:34 PM – 1:49 PM	45 feet from centerline of from centerline of Phillips Road	35
4	Richgrove Drive and Avenue 24 intersection	12:31 PM – 12:46 PM	65 feet from centerline of Richgrove Drive	67

See Figure **3** for Noise Measurement Locations.

[1] The equivalent noise level (L_{eq}) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For these measurements, the L_{eq} was over a 15-minute period.

Source: Rincon Consultants, field measurements conducted on October 8, 2019, using ANSI Type II Integrating sound level meter. See Appendix A.

Figure 3 Noise Measurement Locations

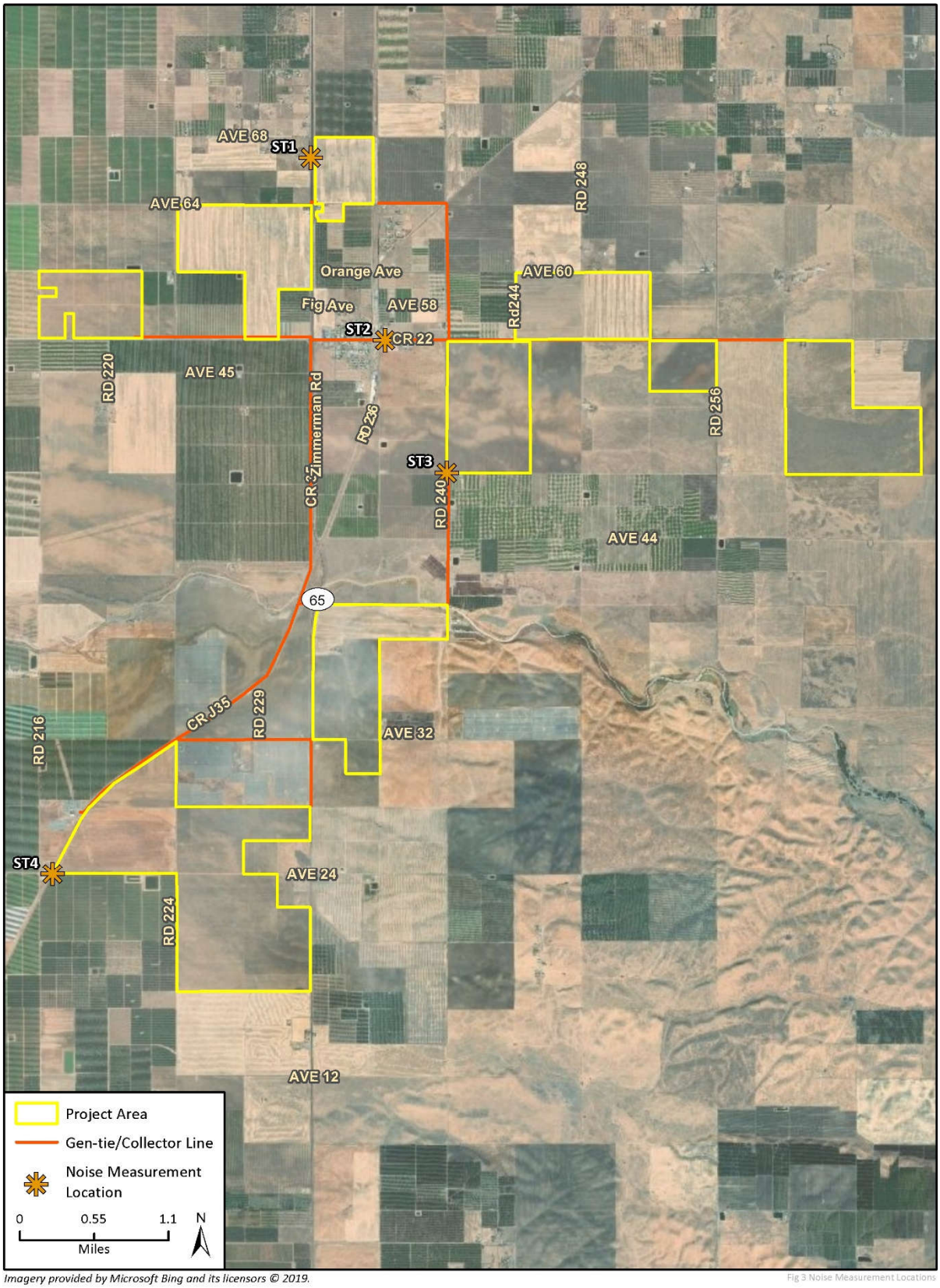

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Fig 3 Noise Measurement Locations

2.4 Regulatory Setting

Tulare County General Plan

Section 10.8 of the Tulare County General Plan provides a framework to protect County residents and visitors from the harmful effects of excessive noise (Tulare County 2012). The plan contains the following policies related to noise in Tulare County that would be relevant to the Project:

- **Policy HS-8.2, Noise Impact Areas:** The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB L_{dn} (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.
- **Policy HS-8.8, Adjacent Uses**: New development of industrial, commercial or other noise-generating land uses will not be permitted if resulting noise levels will exceed 60 dB L_{dn} (or CNEL) at the boundary of areas planned and zoned for residential or other noise-sensitive land uses[1], unless determined to be necessary to promote public health, safety and welfare to the County.
- **Policy HS-8.11, Peak Noise Generators:** The County shall limit noise generating activities, such as construction, to hours of normal business operation (7:00 AM to 7:00 PM). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.
- **Policy HS-8.18, Construction Noise.** The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7:00 AM to 7:00 PM, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.
- **Policy HS-8.19, Construction Noise Control.** The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise impacts on surrounding land uses.

Tulare County Code

The Tulare County Code provides noise regulations regarding nuisance, animal, and agricultural noise. The code does not provide regulations for construction or operational noise that would apply to the Project.

[1] Tulare County defines a noise-sensitive land use as "noise sensitive receptors that include residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses." (Tulare County 2012)

3 Impact Analysis

3.1 Methodology and Significance Thresholds

To assess the potential for temporary construction and long-term operational noise impacts, noise-sensitive receivers closest to the Project Site were identified. The Project parcels are generally located in a rural, agricultural area, with nearby noise-sensitive receivers being located in the community of Ducor single-family residences. Ducor is located in the approximate middle of the northern Project parcels. Figure 4 shows locations of noise-sensitive receivers in Ducor; these include the parcels that have a residential zoning in the area, which also includes undeveloped parcels in Ducor. Single-family residences are also present on agriculturally-zoned land throughout the area.

The nearest residences in Ducor are located near the potential gen-tie route for the project, which may go directly through Ducor along Avenue 56. For the analysis, it is assumed that gen-tie corridor construction would occur within 50 feet of noise-sensitive receivers. The nearest residentially-zoned properties from the Project parcels include the undeveloped property in the northwest corner of Ducor, located approximately 250 feet to the southwest of Project parcels, and the undeveloped property in the southeast corner of Ducor, located approximately 750 feet to the west of Project parcels. The nearest single-family residence on an agriculturally-zoned property is a residence off Avenue 60 within approximately 100 feet of Project construction.

Exposure of the proposed solar facility to ambient noise was not evaluated because the solar facility would not be a noise-sensitive land use.

Construction and Decommissioning Noise

The FHWA's software program Roadway Construction Noise Model (RCNM) was used to estimate construction noise at nearby sensitive receptors. Construction noise modeling results are provided in Appendix B. The types of construction equipment that would be used on-site were provided by 8minute Solar Energy. RCNM provides reference noise levels at the standard distance of 50 feet and estimates noise levels at nearby sensitive receivers based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise such as construction equipment). Although construction equipment may operate near the Project's property lines, construction equipment would be mobile throughout the day and would average a further distance from the property line over a typical construction day. This analysis conservatively assumes that in addition to the distance from the property line to each noise-sensitive receiver, the equipment would average at least 50 feet within the property lines from each noise-sensitive receiver. In addition, RCNM does not consider topography or other environmental factors that attenuate noise and is therefore a conservative model. Experience and observations from similar projects were used for the assumptions of the loudest construction equipment for each activity (gen-tie and parcel construction) that would be operating simultaneously. For gen-tie construction, this was assumed to be a crane and an excavator operating simultaneously. For project parcel construction, this was assumed to be an excavator, auger drill rig, loader, pneumatic tools, and a pickup truck operating simultaneously.

Figure 4 Noise-Sensitive Receivers Closest to Project Site

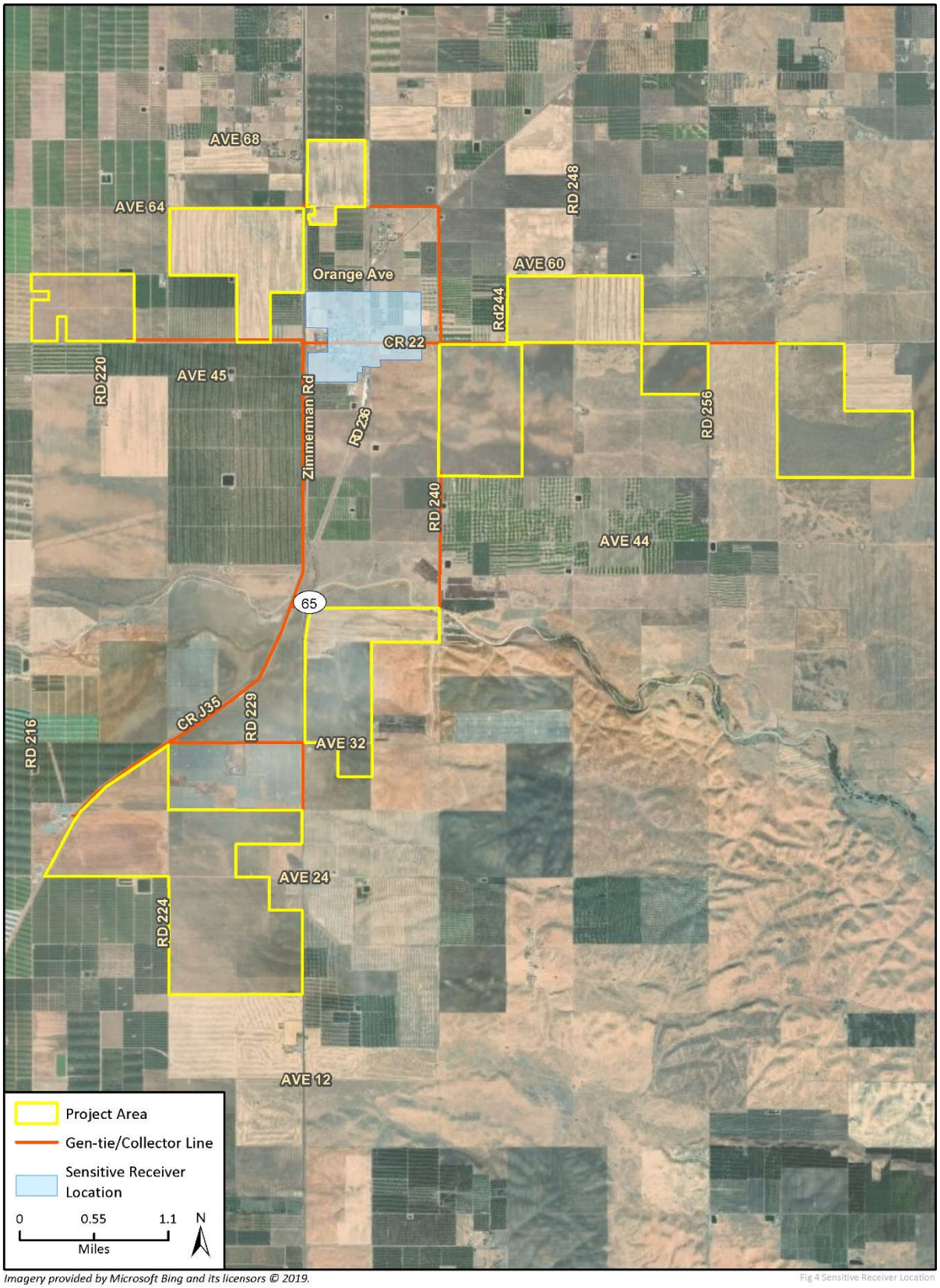

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Fig 4 Sensitive Receiver Location

As Tulare County does not specify quantitative construction noise limits, for purposes of this analysis, the FTA Transit Noise and Vibration Impact Assessment (FTA 2018) criteria will be used. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residentially-zoned uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period.

As stated in Section 1.2, *Project Site and Description*, at the end of the Project's useful life (anticipated to be 30-40 years), the proposed solar facility and associated infrastructure would be decommissioned in accordance with then-current decommissioning practices. At this time, it is not possible to quantitatively evaluate potential noise that would result from Project decommissioning, due to the uncertainty of when decommissioning would occur and the technology or construction practices that would be available at that time. Therefore, based on current decommissioning practices and as a reasonable worst-case scenario, this analysis assumes that noise impacts generated during future decommissioning would be similar to noise impacts generated during the construction phase of the Project.

Construction Traffic Noise

Noise levels from existing traffic and with-construction traffic along Avenue 56, Road 236, and SR 65 were estimated in terms of peak-hour L_{eq} using the Traffic Noise Model, Version 2.5 (TNM 2.5) (FHWA 2004). The model calculations are based on estimates of existing vehicle trips collected by Tulare County Association of Governments in 2016. Vehicle trips generated by Project construction activities are estimated by traffic volumes provided in the Aratina Solar Project Traffic Impact Analysis (EPD Solutions, Inc. 2019), a similar project in the region. The Aratina Solar Project also assumed up to 1,000 workers during peak construction periods, which would occur during the overlap of concrete foundations, structural steel work, and electrical/instrumentation work. A vehicle trip is defined as a one-direction vehicle movement. The total number of trips generated by the Project includes both inbound and outbound trips. The roadways were modeled conservatively using a straight-line analysis (i.e., assuming no attenuation from topography and a straight roadway). Loose soil was used as the default ground type; per FHWA's *Ground and Pavement Effects using FHWA's Traffic Noise Model 2.5* report, an example of loose soil ground can be dirt soil with sparse vegetation, similar to the agricultural setting and the single-family lots of the area (FHWA 2010).

Table 3 shows the estimated number of existing and construction-generated vehicle trips at the modeled roadway segments. The table also includes the estimated speeds for each roadway used in the model. The modal split of construction trips was assumed to be 95 percent passenger cars and 5 percent heavy trucks for construction on Project parcels, consistent with the Aratina Solar Project Traffic Impact Analysis (EPD Solutions, Inc. 2019). The modal split of existing trips was assumed to be a typical 94 percent passenger cars, 4 percent medium trucks, and 2 percent heavy trucks. Peak hour traffic was assumed to be 10 percent of daily traffic (a standard conversion rate between peak-hour and daily traffic). Construction trips were assumed to be split from SR 14 on to Phillips Road or Neuralia Road (8minute 2019, pers. comm.).

Table 3 Estimated Existing and Construction Vehicle Trips

Roadway Segment	Speed Limit (mph)	Existing Daily Vehicle Trips[1]	Construction Daily Vehicle Trips[2]	Existing + Construction Daily Vehicle Trips
Avenue 56	40	1,054	1,055	2,109
Road 236	40[3]	920	1,055	1,975
SR 65 (near Terra Bella)	55	4,632	2,110	6,742

[1] Existing average daily vehicle trips obtained from 2016 traffic counts (Tulare County Association of Governments 2019).

[2] Daily vehicle trips generated by construction were estimated by Aratina Solar Project Traffic Impact Analysis (EPD Solutions, Inc. 2019), a similar project in California that would also have 1,000 peak construction workers. Construction trips were assumed to be split from SR 65 on to Avenue 56 and Road 236 (8minute 2019, pers. comm.).

[3] No posted speed limit in the immediate area; speeds estimated by traffic observed during a site visit.

For traffic-related noise, impacts are considered potentially significant if Project-generated traffic would result in exposure of sensitive receivers to an unacceptable increase in noise levels during construction and/or operational activities. Recommendations in the FTA's *Transit Noise and Vibration Impact Assessment Manual* were used to determine whether increases in traffic noise would be unacceptable (FTA 2018). Under these FTA criteria, as existing ambient noise increases, the "allowable" increase in noise exposure due to a project is reduced. Table 4 shows the FTA criteria considered when evaluating traffic noise generated by this Project. If sensitive receivers would be exposed to traffic noise increases exceeding these criteria, impacts may be considered significant.

Table 4 Significance of Changes in Roadway Noise Exposure

Existing Noise Exposure (dBA L_{dn} or L_{eq})	Allowable Noise Exposure Increase (dBA L_{dn} or L_{eq})
40-45	10
45-50	7
50-55	5
55-60	3
60-65	2
65-74	1
75+	0

Source: FTA 2018

On-Site Operational Noise

On-site operational noise sources were modeled with SoundPLAN. Propagation of modeled stationary noise sources was based on ISO Standard 9613-2, "Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation." The assessment methodology assumes that all receivers would be downwind of stationary sources. This is a worst-case assumption for total noise impacts, since, in reality, only some receivers would be downwind at any one time.

Operational noise sources from the Project include PV solar arrays with associated electrical equipment (such as transformers and inverters), energy storage systems, substations, collector lines, and the operations and maintenance facility. The Project would operate continuously, seven days a

week, until the anticipated repowering or decommissioning of the Project in 30 to 40 years. Stationary noise sources during operation would include PV solar arrays with associated electrical equipment (such as transformers and inverters), energy storage systems, substations, collector lines, and the operations and maintenance facility. Electrical equipment produces a discrete low-frequency humming noise. The noise from transformers is produced by alternating current flux in the core, which causes it to vibrate.

Transformers would be co-located with the inverters, which would lie within an enclosed or canopied metal structure. Within enclosures, inverters typically produce a noise level of 58 dBA L_{eq} at the source (Monterey County 2014). However, a fully enclosed metal structure would attenuate noise from inverter stations more effectively than would a canopy structure with open walls. It is unknown at this time whether the inverters/transformers would be enclosed or open. This would be determined during design once the inverter/transformer manufacturer has been selected. Open inverters would generate a noise level of approximately 52 dBA L_{eq} at a distance of 75 feet (*California Valley Solar Project Final EIR*, San Luis Obispo County 2011). If the inverters are enclosed, each inverter enclosure may also include heating, ventilation, and air conditioning (HVAC) systems mounted on the exterior of the inverter enclosure, which would generate a noise level of 58 dBA L_{eq} at a distance of 75 feet.

Table 5 lists representative noise levels of equipment used for similar solar projects that are assumed to be used on the Project Site.

Table 5 Estimated Noise Rating for Equipment Utilized During Project Operations

Equipment Type	Reference Noise Level (dBA L_{eq})	Distance from Source (feet)
Gen-Tie [1]	20	50
PV Panel	44	50
Inverter (unenclosed)	52	75
Inverter (enclosed with HVAC system)	58	75
Transformer	58	3.3

[1] Only applicable to the gen-tie transmission line.

Sources: U.S. Department of Energy 2011; San Luis Obispo County 2011; Illingworth and Rodkin 2009; Kern County 2014; Monterey County 2014

As shown in Table 5, it is expected that the loudest noise generated by on-site solar operations would come from the HVAC systems at 58 dBA L_{eq} at a distance of 75 feet from the source. As the closed inverter would generate a higher noise level than an open inverter due to the inclusion of HVAC units, the enclosed inverters are conservatively used for this analysis. The combined noise levels from the inverters, HVAC systems and transformers, which would be anticipated to operate simultaneously, are analyzed below at the closest sensitive receivers through SoundPLAN modeling. Noise levels from the gen-tie transmission line, PV panels, and substations/energy storage systems are discussed separately, as these noise sources would be minor in comparison to the HVAC systems and transformers and were not modeled.

Operational noise would result in a significant impact if it would exceed Tulare County's standard of 60 dBA L_{dn} at the boundary of areas planned and zoned for residential or other noise-sensitive land uses.

Operational Traffic Noise

Vehicle trips generated by Project operational activities are estimated by traffic volumes provided in the Aratina Solar Project Traffic Impact Analysis, a similar solar farm project in nearby Kern County, which listed 22 trips for 5 employees (EPD Solutions, Inc. 2019) or 4.4 trips per employee. The Rexford Solar Farm Project is estimated to have 20 employees; therefore, Project operation is estimated to generate 88 trips per day.

The existing traffic volumes used in this analysis are shown in Table 3. These traffic volumes were compared with the expected increase in traffic volumes after construction of the Project. Modeling of traffic noise indicates that, in general, a 10 percent increase in traffic volume would raise traffic noise by approximately 0.4 dBA, a 20 percent increase would raise traffic noise by about 0.8 dBA, a 30 percent increase would result in an approximately 1.1 dBA increase in traffic noise, and a 40 percent increase would increase traffic noise by about 1.5 dBA. The significance of the Project's increase in traffic noise was determined using the FTA criteria shown in Table 4.

Vibration

Vibration associated with construction of the Project has the potential to be an annoyance to nearby land uses. Tulare County does not have adopted limits for determining significance of vibration impacts on structures or persons. Caltrans has developed limits for the assessment of vibrations from transportation and construction sources. The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts on structures from continuous and intermittent sources. The Caltrans *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013b) identifies two impact criteria for buildings and humans: Table 6 presents the impact criteria for buildings, and Table 7 presents the impact criteria for humans. This criteria is used for this vibration analysis.

Table 6 Caltrans Vibration Damage Potential

	Maximum PPV (in./sec.)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2013b

Table 7 Caltrans Vibration Annoyance Potential

Human Response	Maximum PPV (in./sec.)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Severe	0.04	0.01
Strongly perceptible	0.25	0.04
Distinctly perceptible	0.9	0.10
Barely perceptible	2.0	0.4

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2013b

3.2 Results

Construction and Decommissioning Noise

Construction and decommissioning of the Project would involve the use of noise-generating equipment during various phases, including transport of personnel and materials to the site, heavy machinery used in grading and clearing the site, pneumatic post drivers to install foundation supports for solar array modules, as well as equipment used during construction of the proposed solar arrays, infrastructure improvements, and related structures. Emergency diesel generators may be used during construction activities. Project components at all Project parcels and the gen-tie would be constructed over a 12- to 24-month period.

Table 8 shows the noise levels associated with heavy construction equipment at a reference distance of 50 feet from the source. As shown in this table, noise levels at this distance can range from about 74 to 85 dBA, depending upon the types of equipment in operation at any given time and phase of construction (FHWA 2006).

Table 8 Typical Construction Equipment Noise Levels

Equipment	Acoustical Usage Factor (%)[1]	Measured L_{eq} (dBA at 50 feet)
Augur Drill Rig	20	84
Backhoe	40	78
Compactor (ground)	20	83
Concrete Mixer Truck	40	85
Crane	16	85
Dozer	40	82
Dump Truck	40	76
Excavator	40	81
Flat Bed Truck	40	74
Front End Loader	40	79
Generator	50	81
Grader	40	83
Pickup Truck	40	75
Pneumatic Tools	50	85
Roller	20	80
Scraper	40	84
Warning Horn	5	83
Welder/Torch	40	74

[1] The average fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: FHWA 2006

Construction activities would be subject to Tulare County policies and regulations. Heavy construction activities would normally occur on-site between the hours of 6:00 AM and 5:00 PM, which is between the acceptable hours for construction listed in the Tulare County General Plan (7:00 AM to 7:00 PM, Monday through Saturday) except for the 6:00 AM to 7:00 AM hour and on Sunday. Additional hours may also be necessary to make up schedule deficiencies or to complete critical construction activities. As a result, some construction activities may be required to continue 24 hours per day, seven days per week. Activities that generate relatively low amounts of noise, such as refueling equipment, staging material for the following day's construction activities, quality assurance/control, and commissioning, may potentially occur between the hours of 9:00 PM and 6:00 AM on weekdays and the hours of 9:00 PM and 8:00 AM on weekends. Per the Tulare County General Plan, these activities would require a permit from the County.

Noise-sensitive receivers near Project construction include single-family residences in Tulare County in and near the community of Ducor. These land uses would experience a temporary increase in noise during construction of the Project. The following subsections detail the impacts to noise-sensitive receivers in proximity to the Project parcels and the gen-tie corridor.

Construction at Project Parcels

Table 9 shows the estimated average noise level from construction at the Project parcels at the nearest noise-sensitive land uses using RCNM.

Table 9 Noise Levels at Various Distances from Construction at the Project Parcels

Receiver	Distance from Construction (feet)[1]	Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	82
Single-family residence on agriculturally-zoned property of Avenue 60	150	75
Single-family residentially- zoned property off SR-65	300	69
Single-family residentially-zoned property off Avenue 56	800	61

See Appendix B for model outputs.

[1] Distances include the distance from the Project parcel boundary to the receivers, plus 50 feet to account for construction equipment that be mobile throughout the day and would average a further distance (of approximately 50 feet) from the property line over a typical construction day.

As shown in Table 9, although construction noise levels from simultaneous heavy equipment operation would reach 82 dBA L_{eq} at the reference distance of 50 feet, due to the further distance between construction at the Project parcels and the nearest noise-sensitive receivers, construction noise levels under the conservative scenario analyzed would only reach as high as 75 dBA L_{eq}. This would be below FTA's construction noise threshold of 80 dBA L_{eq} (8-hour). Heavy construction activity involving pneumatic tools and graders also would not occur during nighttime hours.

Per Policy HS-8.18 of the Tulare County General Plan, construction activities outside of acceptable hours would require a permit to conduct construction activities during those hours. Project construction may occur outside of the allowed construction hours (7:00 AM to 7:00 PM, Monday through Saturday). In accordance with the requirements of Policy HS-8.18, the Project would obtain a permit to conduct construction work outside of the allowed hours. Therefore, impacts would be less than significant.

Gen-Tie

The gen-tie corridor may be routed through Avenue 56, the thoroughfare that bisects the community of Ducor. For the purposes of this analysis, at the closest point of construction, the gen-tie routes would be located approximately 50 feet from single-family residences. As modeled, the loudest anticipated construction noise from gen-tie construction would potentially involve the simultaneous use of an excavator and a crane. Table 10 shows construction noise levels at the nearest noise-sensitive receiver.

Table 10 Typical Construction Noise Levels at Various Distances from Gen-Tie Construction

Receiver	Distance from Construction (feet)	Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	78
Single-family residence in Ducor[1]	50	78

See Appendix B for model outputs.

[1] Closest noise-sensitive land uses in the community of Ducor are located on Avenue 56.

As shown in Table 10, simultaneous heavy equipment use during gen-tie construction would generate a noise level of up to 78 dBA L_{eq} when within 50 feet of single-family residences in Ducor. This would be below FTA's construction noise threshold of 80 dBA L_{eq} (8-hour). Most gen-tie construction activities would occur further from nearby noise receptors, and would, therefore, result in lower noise levels. Heavy construction would also not occur during nighttime hours.

Per Policy HS-8.18 of the Tulare County General Plan, construction activities outside of acceptable hours would require a permit to conduct construction activities during those hours. Project construction may occur outside of the allowed construction hours (7:00 AM to 7:00 PM, Monday through Saturday). In accordance with the requirements of Policy HS-8.18, the Project would obtain a permit to conduct construction work outside of the allowed hours. Therefore, impacts would be less than significant.

Project Decommissioning

As stated in Section 1.2, *Project Site and Description*, at the end of the Project's useful life (anticipated to be 30-40 years), the solar facility and associated infrastructure may be decommissioned in accordance with then-current decommissioning practices. Given the Project's operating life cycle and distant timeframe for decommissioning activities, it is too speculative to quantify the potential noise impacts that could occur during decommissioning activities. On a rough basis, decommissioning would be similar to Project construction and be completed in 12 to 24 months. Assuming that the facility would be torn down and the materials present recycled or disposed, temporary noise associated with such actions are assumed to be generally similar to the noise levels that would result from Project construction. Similar to the noise generated during construction of the Project, decommissioning activities would be conducted in accordance with all applicable requirements in effect at the time of Project termination. Potential future environmental effects associated with Project decommissioning would be addressed at the time decommissioning is proposed consistent with regulations in effect at that time. A final decommissioning plan, based on then-current technology, site conditions, and regulations, would be prepared prior to actual decommissioning.

Cumulative Construction Noise

As described in Section 1.2, *Project Site and Description*, Project components at all sites would be constructed over a 12- to 24-month period. This analysis makes a conservative assumption that construction at all Project parcels and the gen-tie would occur simultaneously. Concurrent construction activity at more than one parcel and the gen-tie line may expose nearby residences to cumulative noise impacts. This analysis of cumulative effects focuses on the effects of concurrent construction activities for the worst-case scenario (i.e., the closest residences which would be exposed to construction activities at multiple sites).

Some noise sensitive receivers located in Ducor would be exposed to adjacent construction noise from gen-tie construction and more distant noise from Project parcels. Because of these residences proximity to gen-tie construction (as close as 50 feet), cumulative noise levels are dominated by gen-tie construction noise. The residence at 5651 Road 240 is the closest noise-sensitive receiver within 50 feet of gen-tie construction that is closest to parcel construction. These include parcels located at a distance of 475, 2,850, and 5,400 feet. This residence is representative of a reasonable conservative scenario for combined project construction noise impacts, assuming concurrent construction of gen-tie corridor and the nearest Project parcels. Table 11 estimates the cumulative construction noise

levels for this scenario, which could reach approximately 78 dBA L_{eq}. This would be below FTA's construction noise threshold of 80 dBA L_{eq} (8-hour).

Table 11 Cumulative Construction Noise Levels for Worst-Case Scenario[1]

Project Site	Distance from Construction (feet)	Noise Level at Receptor (dBA L_{eq})
Gen-tie	50	78
Project Parcel	475	65
Project Parcel	2,850	50
Project Parcel	5,400	44
Cumulative Noise Level		**78**

[1] Conservative scenario is for Ducor Union Elementary School, which is closest noise-sensitive receiver e to the Project parcels that is adjacent to gen-tie construction.

Per Policy HS-8.18 of the Tulare County General Plan, construction activities outside of acceptable hours would require a permit to conduct construction activities during those hours. Project construction may occur outside of the allowed construction hours (7:00 AM to 7:00 PM, Monday through Saturday). In accordance with the requirements of Policy HS-8.18, the Project would obtain a permit to conduct construction work outside of the allowed hours. Therefore, impacts would be less than significant.

Construction Traffic Noise

Construction of the Project would increase traffic noise offsite from commuting construction workers and from haul trucks bringing materials to and from the Project Site. Project components would be constructed simultaneously over a 12- to 24-month period. This could expose nearby residences to cumulative noise from construction traffic. This analysis of cumulative effects focuses on the effects of concurrent construction traffic for the worst-case scenario (i.e., traffic generated by the peak construction period). Table 3 in Section 3.1, *Methodology and Significance Thresholds*, compares existing daily traffic volumes on nearby road segments to anticipated traffic generated by Project construction. Based on these traffic volumes, Table 12 shows modeled traffic noise levels at the nearest receivers under existing traffic conditions and with construction traffic.

Table 12 Construction Traffic Noise

Roadway	Nearest Sensitive Receiver	Distance from Roadway Centerline to Nearest Sensitive Receiver (feet)	Existing Traffic Noise (dBA L_{eq})	With-Construction Traffic Noise (dBA L_{eq})	Change in Traffic Noise (dBA L_{eq})	FTA Allowable Noise Exposure Increase (dBA L_{eq})
Avenue 56	Single-family residence	50	57	60	3	3
Road 236	Single-family residence	80	52	56	4	5
SR 65 (near Terra Bella)	Single-family residence	150	57	59	2	3

As shown in Table 12, construction traffic would increase noise levels by up to 4 dBA L_{eq} at the nearest sensitive receivers. However, none of the traffic noise increases would exceed the applicable FTA criteria. Therefore, the short-term increase in traffic noise from Project construction would be less than significant.

On-Site Operational Noise

Solar Array Noise

Sensitive receivers nearby the Project parcels include single-family residences in the community of Ducor and rural single-family residences associated with agricultural properties. Noise levels from the Project's solar array operations (i.e., transformers and HVAC units associated with the inverters) are shown in Table 13, and noise level contours and receiver locations are shown in Figure 5.

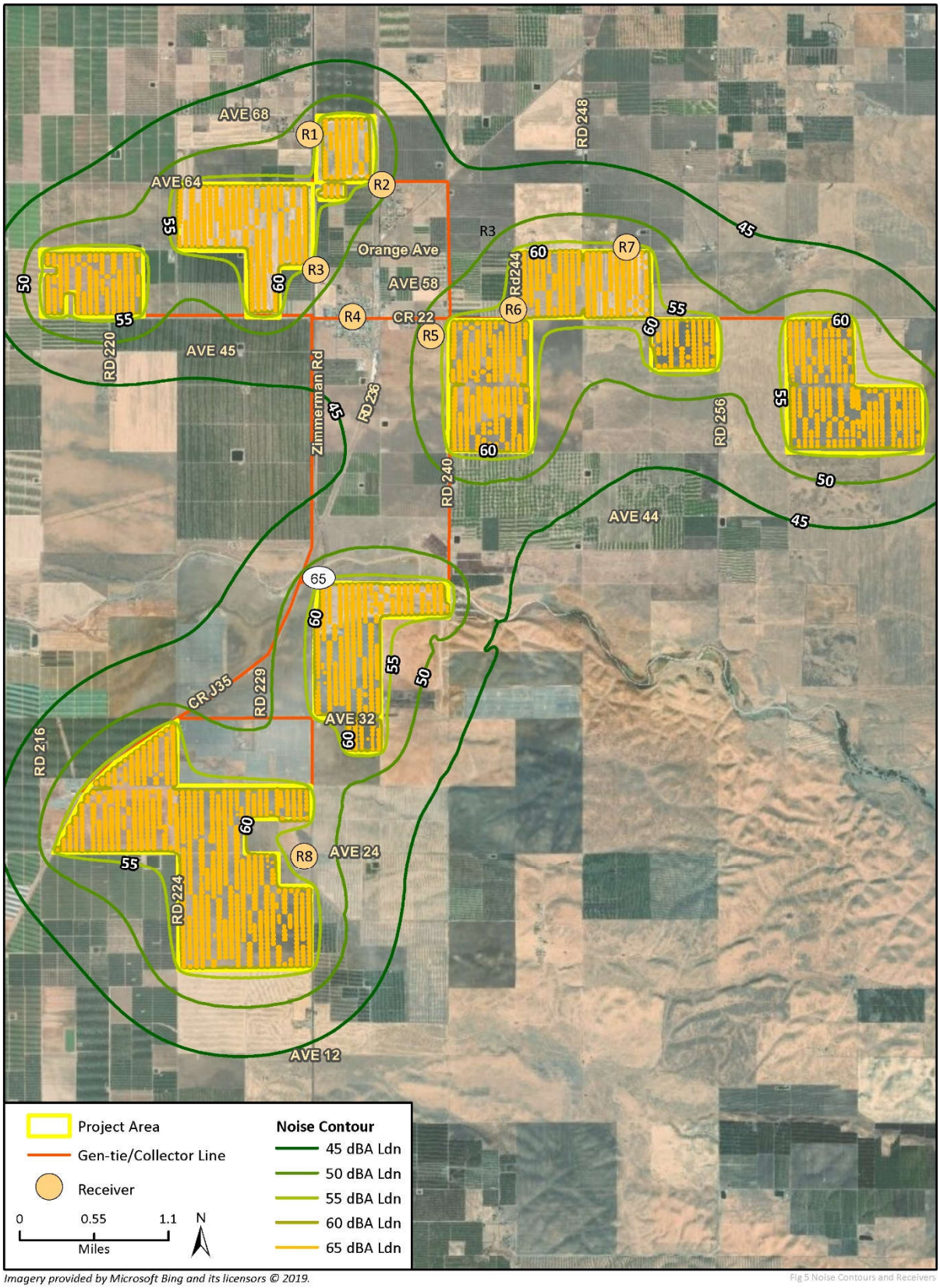
Table 13 Operational Noise Levels at Nearest Sensitive Receivers

Receiver	Receiver Description	Noise Level at Receiver		Exceed Threshold?
		dBA L_{eq}	dBA L_{dn}	
R1	Residence on agriculturally-zoned property	47	53	No
R2	Residence on agriculturally-zoned property	45	51	No
R3	Residence in Ducor on residentially-zoned property	46	53	No
R4	Central Ducor	41	47	No
R5	Residence in Ducor on residentially-zoned property	46	52	No
R6	Residence on agriculturally-zoned property	52	58	No
R7	Residence on agriculturally-zoned property	50	56	No
R8	Residence on agriculturally-zoned property	47	53	No

Note: Calculations completed in SoundPLAN; See Figure 5 for receiver locations.

As shown in Table 13, operational noise levels from the project site would reach up to 58 dBA L_{dn} at noise-sensitive land uses. These noise levels would be below Tulare County's standard of 60 dBA L_{dn} for noise at noise-sensitive land uses. Therefore, operational noise impacts from the Project would be less than significant.

Figure 5 Receiver Locations and Operational Noise Contours



Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 5 Noise Contours and Receivers

Gen-Tie

The gen-tie transmission line would generate noise from the corona affect, which is a phenomenon associated with the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware due to very high electric field strength. This is audible power line noise that is generated from electric corona discharge, which is usually experienced as a random crackling or hissing sound. The corona effect on the gen-tie transmission line would generate a noise level of approximately 20 dBA at a distance of 50 feet (*California Valley Solar Project Final EIR*, San Luis Obispo County 2011). This is the approximate distance to the nearest residences from the gen-tie route. As observed during a site visit to existing solar farms, noise levels from these transmissions lines were not detected over the existing ambient noise sources in the area (wind and vehicles) just outside of the solar farm properties. Therefore, per site observations and the general low noise of transmissions lines, gen-tie noise would not exceed County's standard of 60 dBA L_{dn} at the nearest residences, and impacts would be less than significant.

PV Panel

PV panel noise would come from the tracking motors. These systems involve the panels being driven by motors to make brief, incremental adjustments to track the arc of the sun to maximize the solar effect. While these motors may generate noise of up to 44 dBA at 50 feet, these motors would operate briefly throughout an hour (e.g., several minutes per hour) as the sun moves west across the sky, and then would reset at night to face the eastern sky. By operating only several minutes per hour, the hourly noise level would be negligible at the nearest sensitive receivers. In addition, as observed during a site visit to the area and viewing of existing solar farms in the area, noise levels from PV panel tracking were not detected over the existing ambient noise sources in the area (wind, vehicles, planes, and trains) just outside of the solar farm properties. Therefore, noise levels from the PV panels would be less than significant.

Substation/Energy Storage System

The substation and energy storage systems would likely be constructed in a similar area of the Project. These facilities would collect, transmit, and store energy generated by the solar arrays. Noise generated by these facilities may include HVAC units. However, the transformers and inverters analyzed earlier in this section would include a much larger number of HVAC units for the inverters and additional noise from the transformers spread across the Project Site that would be more prominent than the noise generated by the substation and energy storage system, which would be located in one area of the Project Sites. In addition, as observed during a site visit to the area and viewing of existing solar farms in the area, noise levels from substations and energy storage systems were not detected over the existing ambient noise sources in the area (wind, vehicles, planes, and trains) just outside of the solar farm properties. Therefore, noise levels from the PV panels would be less than significant.

Operational Traffic Noise

Once the Project is complete, vehicle trips to the Project Site would be associated with operations and maintenance of the solar facility. In addition, the Project would require occasional nighttime activities, including deliveries, repairs, maintenance, office and administrative activities, security personnel, and emergency response.

As shown in Table 14, existing roadways would generate noise levels of 52 to 57 dBA L_{eq} to the nearest single-family residences. Pursuant to the FTA criteria described in Table 4, a significant noise

impact would occur if roadway noise would increase by more than 3 dBA for SR 65 and Avenue 56 traffic and 5 dBA for Road 236 traffic. With the relatively minor increase in traffic volumes from Project operation (88 trips), Project operation would increase noise by less than 1 dBA on each roadway. This increase would be imperceptible to the nearest residents and would not exceed applicable FTA criteria. Therefore, the Project's noise increases from operational traffic would have a less than significant impact.

Table 14 Operational Traffic Noise

Roadway	Nearest Sensitive Receiver	Distance from Roadway Centerline to Nearest Sensitive Receiver (feet)	Existing Traffic Noise (dBA L_{eq})	With-Operational Traffic Noise (dBA L_{eq})	Change in Traffic Noise (dBA L_{eq})	FTA Allowable Noise Exposure Increase (dBA L_{eq})
Avenue 56	Single-family residence	50	57	57	<1	3
Road 236	Single-family residence	80	52	52	<1	5
SR 65 (near Terra Bella)	Single-family residence	150	57	57	<1	3

Vibration

Construction at Project Parcels

Construction at the Project parcels may require post driving and has the potential to result in temporary vibration impacts on structures and humans. Based on the potential site locations, post driving activities could occur within 150 feet of the nearest off-site residential structure. It was conservatively assumed that an impact pile driver, as discussed in Caltrans' *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013b), would be used for the project. It should be noted that an impact pile driver as considered by Caltrans is larger than the type of equipment that would be used to drill in posts for the solar panels (e.g., an impact pile driver on the scale analyzed by Caltrans would typically be used for large bridge concrete footings, etc.). Other construction activities are less intensive than pile driving and would have lower PPV than pile driving. Therefore, vibration levels from pile driving are considered a conservative scenario for construction at the Project parcels. Caltrans provides the following equation to calculate PPV at sensitive receptors (Caltrans 2013b):

$$\text{PPV Impact Pile Driver} = PPV_{Ref} (25/D)^{n} \times (E_{equip}/E_{Ref})^{0.5} \text{ (in./sec.)}$$

Where:

PPV_{Ref} = 0.65 in/sec for a reference pile driver at 25 feet

D = distance from pile driver to the receiver in feet

n = 1.1 is a value related to the vibration attenuation rate through ground

E_{equip} is rated energy of impact pile driver in ft-lbs

E_{Ref} is 36,000 ft-lb (rated energy of reference pile driver)

Using the referenced formula and an assumed 2,400 ft-lb rated energy for the post driver, the PPV at the nearest residential structure would be 0.024 in./sec. PPV, which would be below the Caltrans continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.3 in./sec. PPV and the strongly perceptible human annoyance threshold of 0.10

in./sec. PPV. Therefore, vibration impacts associated with construction of the proposed Project would be less than significant.

Gen-tie Construction

Gen-tie construction may require the use of an auger drill rig that has the potential to result in temporary vibration impacts on structures and humans. Based on the potential site locations, auger drilling activities could occur within 50 feet of the nearest off-site residential structure. Other than use of an auger drill rig, other construction activities at the gen-tie corridors are less intensive than auger drill rig and would have lower PPV than the auger drill rig. Therefore, vibration levels from the auger drill rig are considered worst case for the gen-tie construction. Caltrans provides the following equation to calculate PPV at sensitive receptors (Caltrans 2013b):

$$PPV\ Equipment = PPV_{Ref}\ (25/D)^{n}\ (in./sec.)$$

Where:

PPV_{Ref} = Equipment reference vibration level at 25 feet

D = distance from equipment to the receiver in feet

n = 1.1 is a value related to the vibration attenuation rate through ground

Caltrans vibration guidelines do not provide vibration levels specifically for an auger drill rig; however, the guidelines do provide vibration levels for caisson drilling of 0.089 in./sec. PPV. A caisson drill would typically drill a much larger hole than the type of bore performed for a solar foundation post (e.g., a caisson drill would be used to drill a bridge pier). Although a caisson drill is a more intensive activity that would result in greater vibration than an auger drill, it was used as a conservative reference for this analysis. Using the referenced formula, the PPV at the residential structure would be 0.04 in./sec. PPV, which would be below the Caltrans continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.3 in./sec. PPV and the strongly perceptible human annoyance threshold of 0.10 in./sec. PPV. In addition, heavy construction activity involving drilling would not occur during nighttime hours. Therefore, vibration impacts associated with construction of the proposed Project would be less than significant.

Operation

Once constructed, the proposed PV facility would not have any components that would generate vibration levels. Thus, operation of the proposed Project would not result in any vibration and impacts would be less than significant.

4 Conclusions

The Project would not generate construction noise, construction traffic noise, vibration, on-site operational noise, or operational traffic noise exceeding applicable standards. Therefore, the Project would not result in potentially significant impacts from noise, and no mitigation would be required.

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Appendix A

On-Site Noise Measurement Data

Appendix B

Roadway Construction Noise Model (RCNM) Results

APPENDIX J
TRAFFIC IMPACT ANALYSIS

Rexford Solar Farm Project Traffic Impact Analysis

Tulare County

February 5, 2020

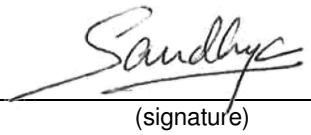
Prepared for:

20SD 8ME LLC
c/o 8minute Solar Energy
5455 Wilshire Blvd, Suite 2010
Los Angeles, CA 90036

Prepared by:

Stantec Consulting Services Inc.

This document entitled Rexford Solar Farm Project Traffic Impact Analysis was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of 20SD 8ME LLC (the "Client").

Prepared by  (signature)

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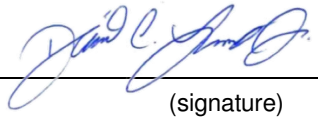
Reviewed by  (signature)

David Lundgren

Project Manager

(415)-281-5503

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Acronyms and Abbreviations

AADT	annual average daily traffic
ADT	average daily traffic
Applicant	20SD 8me LLC
Caltrans	California Department of Transportation
Client	20SD 8me LLC
ESS	energy storage system
HCM 6	Highway Capacity Manual, Sixth Edition
kV	kilovolt
LOS	level of service
MP	Mile Post
NB	Northbound
O&M	operations and maintenance
PCE	Passenger car equivalent
PHV	peak hour volume
Project	Rexford Solar Farm Project
PV	photovoltaic
SB	southbound
SR	State Route
Stantec	Stantec Consulting Services Inc.

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has performed a traffic impact analysis for the Rexford Solar Farm Project (Project), the proposed construction and operation of a 700 megawatt-alternating current (MW-AC) utility-scale solar farm with an energy storage system (ESS) located in unincorporated Tulare County, California. 20SD 8me LLC (applicant) is seeking approval of a conditional use permit for the project. The purpose of the analysis is to determine the amount of traffic generated by the project during construction and operation and to identify potential traffic-related significant impacts on the affected portions of the circulation system.

2.0 PROJECT DESCRIPTION

2.1 PROJECT INFORMATION

20SD 8me LLC is seeking approval of conditional use permit (CUP) for the construction of an up to 700 megawatt-alternating electrical current (MW-AC) utility-scale solar farm with an Energy Storage System known as Rexford Solar Farm Project in unincorporated Tulare County, California (Figure 1). The applicant proposes to construct, own, and operate the Project, and will secure CUPs from Tulare County along with permits from other relevant agencies as required by law.

2.1.1 Project Site Information

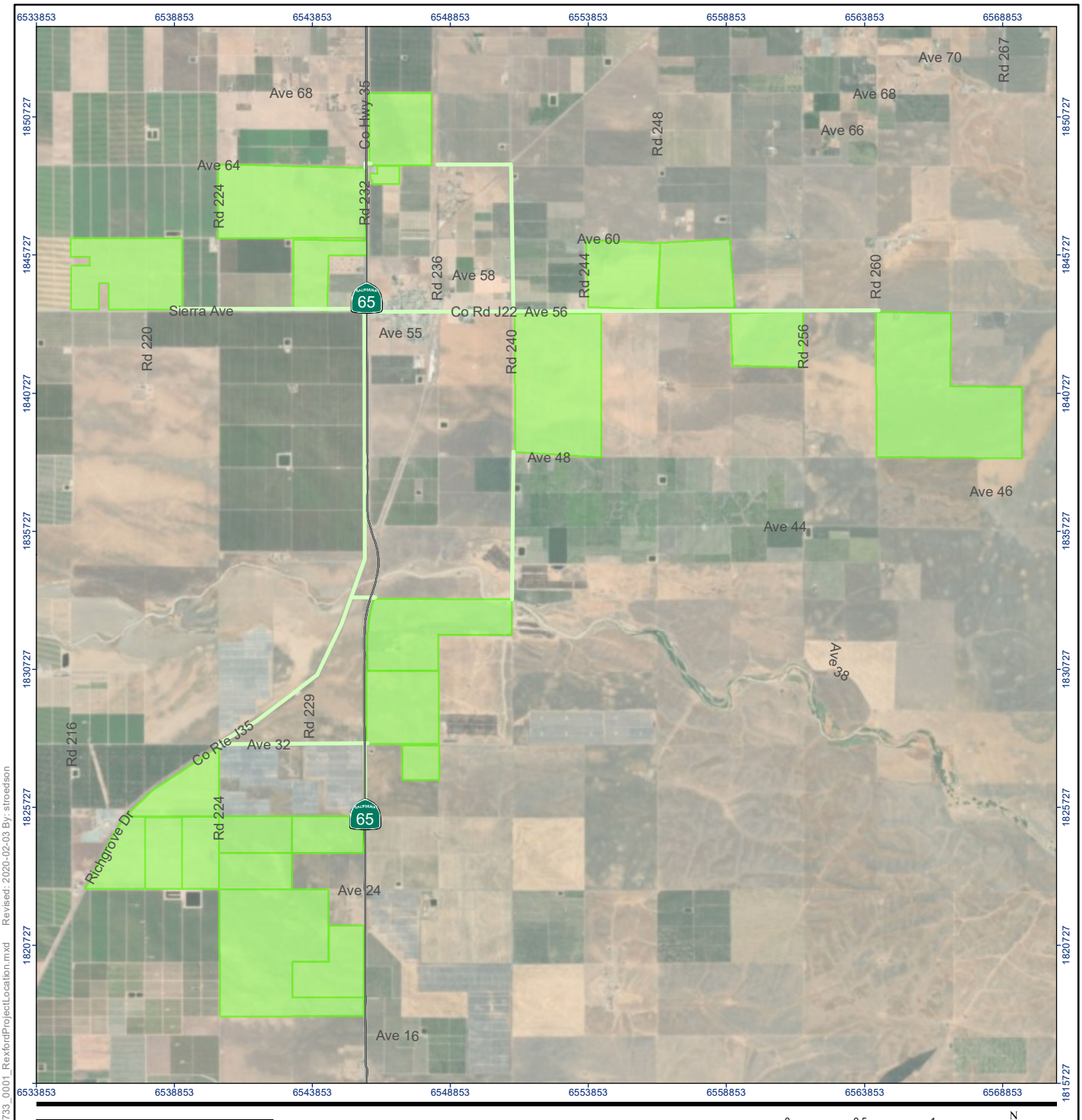
The Project is comprised of 40 assessor's parcels (Project area) totaling approximately 3,620 gross acres as shown in Table 1. The permanent disturbance acreage associated with development of the solar facility and associated infrastructure (Project site) within the Project area would be less than the gross acreage of the Project area. The topography of the Project Area is relatively flat. The majority of the Project is bisected by State Route 65.

Table 1: Rexford Parcels

No.	APN	Acres
1	339-110-001	395.00
2	339-050-006	80.00
3	339-050-007	38.50
4	339-050-008	38.50
5	339-050-013	188.43
6	339-050-004	40.00
7	321-140-007	20.00
8	321-140-008	5.00

No.	APN	Acres
9	321-140-014	20.00
10	321-140-010	5.00
11	321-140-012	7.20
12	321-140-013	9.40
13	321-140-015	157.48
14	321-120-002	160.00
15	321-120-004	155.89
16	321-130-005	99.70
17	321-040-011	13.66
18	321-040-025	32.63
19	321-040-008	75.50
20	321-040-007	18.44
21	321-110-016	14.67
22	339-110-008	76.00
23	339-110-009	40.00
24	339-080-016	80.00
25	339-080-005	40.00
26	339-080-013	80.00
27	339-080-015	80.00
28	339-070-014	88.00
29	339-070-015	80.00
30	339-070-016	80.00
31	321-200-006	200.00
32	321-190-001	160.00
33	321-190-002	40.00
34	321-210-004	116.00
35	339-070 026	106.80
36	321-070-014	156.70
37	321-070-026	156.40
38	323-040-006	160.47
39	323-040-008	160.80
40	323-040-007	157.70
	Total Acres	**3,619.97**

Note:
APN = Assessor Parcel Number



Rexford Collector Route

Rexford Solar Project

0 0.5 1 Miles

(At original document size of 8.5x11)
1:63,360

N

Notes

1. Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet

2. Project Data Sources: 8 Minute Solar Energy and Stantec

3. Basemap Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Stantec

8MINUTE SOLAR ENERGY

Project Location
Northeast of Delano
Tulare County, CA

Prepared by JAC on 2020-02-03
TR by SET on 2020-02-03
IR by CB on 2020-02-03

Client/Project
185704633_0001
8 Minute Solar Energy
Rexford Solar Project

Figure No.
1

Title
Rexford Solar Project Location

V:\185\Active\185704733_RexfordSolar\03_data\gis_cad\gis\185704733_0001_RexfordProjectLocation.mxd Revised: 2020-02-03 By: stroedson

2.2 DESCRIPTION OF PROPOSED PROJECT

The applicant proposes to develop a photovoltaic (PV) energy facility and ESS within the Project Area that is capable of producing up to 700 megawatts (MW) of alternating current (AC) power, and up to 700MW-AC of storage capacity. Power generated by the Project would be delivered from the Project site via an up to 230-kilovolt (kV) overhead and/or underground generation-tie line (gen-tie) originating from one or more onsite substation(s)/switchyard(s) and terminating at the Southern California Edison (SCE) Vestal Substation.

The Project may include operations & maintenance (O&M) buildings, substations, ESSs, and gen-tie facilities, as necessary, or it may share such facilities with other nearby Projects or with any future energy Projects in the area, and/or it may be remotely operated. Alternatively, if shared facilities are used, those areas designated in the application materials for O&M building, substation, and/or transmission facility may be occupied by solar panels.

Up to 20 full-time employees would operate the Project. Typically, most staff would work during the day shift (sunrise to sunset) and the remainder would work during the night shifts and weekends. If the Project shared O&M, substation, and/or transmission facilities with one or more nearby solar Projects, and/or became remotely operated, the Project's onsite staff could be reduced.

After the useful life of the Project, the panels would be disassembled from the mounting frames and the Project site would be restored to its pre-development condition.

2.2.1 PV Module Configuration

The Project would use PV panels or modules[1] on mounting frameworks to convert sunlight into electricity. Individual panels would be installed on either fixed-tilt or tracker mount systems (single- or dual-axis using galvanized steel or aluminum). If the panels are configured for fixed tilt, the panels would be oriented toward the south. For tracking configurations, the panels would rotate to follow the sun over the course of the day. Although the panels could stand up to 20 feet high depending on the mounting system used and on County building codes, panels are expected to be between 6 and 8 feet high.

The solar panel array would be arranged in groups called blocks, with inverter stations generally located centrally within the blocks. Blocks would produce direct electrical current (DC), which is converted to AC at the inverter stations.

Each PV module would be placed on a fixed-tilt or tracker mounting structure. The foundations for the mounting structures can extend up to 10 feet below ground, depending on the structure, soil conditions, and wind loads, and may be encased in concrete or use small concrete footings. A light-colored ground cover or palliative may be used to increase electricity production. Final solar panel layout and spacing would be optimized for Project Area characteristics and the desired energy production profile.

[1] Including but not limited to bi-facial concentrated photovoltaic (CPV) technology

2.2.2 Inverter Stations

Direct Current (DC) energy is delivered from the panels via cables to inverter stations, generally located near the center of each block. Inverter stations convert the DC energy to AC energy, which can be dispatched to the transmission system. Inverter stations are typically comprised of one or more inverter modules with a rated power of up to 5 MW each, a unit transformer, and voltage switch gear. The unit transformer and voltage switch gear are housed in steel enclosures, while the inverter module(s) are housed in cabinets. Depending on the vendor selected, the inverter station may lie within an enclosed or canopied metal structure, typically on a skid or concrete-mounted pad.

2.2.3 Energy Storage System

The Project may include one or more ESSs, located at or near a substation/switchyard (onsite or shared) and/or at the inverter stations, or elsewhere onsite. Such large-scale ESSs would be up to 700 MW-AC in capacity and occupy up to 25 acres in total area. ESSs consist of modular and scalable battery packs and battery control systems that conform to U.S. national safety standards. The ESS modules, which could include commercially available lithium or flow batteries, typically consist of International Organization for Standardization (ISO) standard containers (approximately 40 feet long by 8 feet wide by 8 feet high) housed in pad- or post-mounted, stackable metal structures but may also be housed in dedicated building(s) in compliance with applicable regulations. The maximum height of a dedicated structure is not expected to exceed 25 feet. The actual dimensions and number of energy storage modules and structures would vary depending on the application, supplier, and configuration chosen, as well as on offtaker/power purchase agreement requirements and on County building standards.

2.2.4 Substation

Output from the inverter stations would be transferred via electrical conduits and electrical conductor wires to one or more project substations or switchyards (collectively referred to as a substations herein). Each substation may contain several components, including auxiliary power transformers, distribution cabinets, revenue metering systems, a microwave transmission tower, and voltage switch gear. Each substation would occupy an area of approximately 5 acres, secured separately by an additional chain-link fence. The final location(s) would be determined before issuance of building permits.

Substations typically include a small control building (roughly 500 square feet) standing approximately 10 feet tall. The building would either be prefabricated concrete or steel housing with rooms for the voltage switch gear and metering equipment, a room for the station supply transformer, and a separate control technology room within which the main computer, intrusion detection system, and main distribution equipment would be housed. Components of this building (e.g., control technology room and intrusion detection system) may instead be located at the O&M building(s) below.

2.2.5 Transmission Line

Power would be transmitted from the Project's substations to SCE's Vestal Substation via an up to 230 kV overhead and/or underground gen-tie line. A franchise and/or encroachment agreement along public roads may ultimately be required for portions of the transmission line.

2.2.6 Water Usage

Water demand for panel washing and O&M domestic use is not expected to exceed 50 acre-feet per year. Water usage during construction, primarily for dust-suppression purposes, is not expected to exceed 400 acre-feet. Water is anticipated to be obtained from existing onsite wells or delivered via truck from an offsite source(s). A small water treatment system may be installed to provide deionized water for panel washing.

2.2.7 Water Storage Tank(s)

One or more aboveground water storage tanks with a total capacity of up to 50,000 gallons may be placed on-site near the O&M building. The storage tank(s) near the O&M building would have appropriate fire department connections to be used for fire suppression purposes.

2.2.8 Operations and Maintenance Building

The Project may include an O&M building of approximately 40 feet long by 80 feet wide, with associated onsite parking. The O&M building would be steel framed with metal siding and roof panels. The O&M building may include the following:

1. Office
2. Repair building/parts storage
3. Control room
4. Restroom
5. Septic tank and leach field

Roads, driveways, and parking lot entrances would be constructed in accordance with Tulare County improvement standards. Parking spaces and walkways would be constructed in conformance with all California accessibility regulations.

2.2.9 Project Site Security and Fencing

The Project site would be enclosed within a chain link fence with barbed wire measuring up to 8 feet above finished grade. An intrusion alarm system would be integrated into the perimeter fence, with intrusion detection cabinets placed approximately every 1,500 feet along the perimeter fence. An intrusion control unit or similar technology may be installed in the substation control room or at the O&M building. Additionally, the Project may include additional security measures including, but not limited to, barbed wire, low-voltage fencing with warning reflective signage, controlled access points, security alarms, security camera systems, and security guard vehicle patrols to deter trespassing and unauthorized activities that could interfere with operation of the Project.

Gates would be maintained at the main entrances to the Project to restrict access. Project access would be provided to offsite emergency responders in the event of an after-hours emergency. Enclosure gates would be manually operated with a key provided in an identified key box location.

2.2.10 Project Site Lighting

Project Site lighting would be directed away from public rights-of-way and would be minimal. Site lighting may include motion sensor lights for security purposes. Lighting would be of the lowest intensity in compliance with any applicable regulations, measured at the property line after dark.

2.3 CONSTRUCTION ACTIVITIES

Site preparation, construction, testing, and commercial operation is expected to commence as early as Q4 2021 and would extend for 12 to 24 months.

Construction would include the following:

- site preparation
- grading and earthwork
- concrete foundations
- structural steel work
- electrical/instrumentation work
- collector line installation
- architecture and landscaping

No roads would be affected by the Project, except during the construction period. Construction vehicles would primarily access the Site from State Route 65 and may also utilize county roads. It is estimated that up to 1,000 workers per day (during peak construction periods) would be required during the construction of the Project.

Heavy construction would to occur between 6:00 AM and 5:00 PM, Monday through Friday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. Some activities may continue 24 hours per day, seven days per week. Low-level noise activities may potentially occur between 10:00 PM and 7:00 AM. Nighttime activities could potentially include, but are not limited to, refueling equipment, staging materials, quality assurance and control, and commissioning.

Truck deliveries would normally occur during daylight. However, there would be offloading and/or transporting to the Project area on weekends and during evenings.

Earth-moving is expected to be limited to the construction of the access roads, O&M building, substation, ESS(s), and any stormwater protection or storage (detention) facilities. Final grading may include revegetation with low growing grass or applying earth-binding materials to disturbed areas.

2.4 WORK FORCE

Once the Project is constructed, maintenance would generally be limited to workers accomplishing the following:

1. Cleaning of PV panels
2. Monitoring electricity generation
3. Providing site security
4. Facility maintenance – replacing or repairing inverters, wiring, and PV modules

The project would require up to 20 full-time O&M employees. If the project uses shared O&M, substation, ESS, and/or transmission facilities with any nearby or future projects, shared personnel would reduce O&M staff.

The facility would operate seven days a week, 24 hours a day, generating electricity during normal daylight hours when the solar energy is available. Maintenance activities may occur seven days a week, 24 hours a day to ensure PV panel output when solar energy is available.

2.5 PROJECT FEATURES AND BEST MANAGEMENT PRACTICES

The following sections describe standard Project features and best management practices that would be applied during construction and long-term operation of the Project to maintain safety and minimize or avoid environmental impact.

2.5.1 Waste and Hazardous Materials Management

The Project would have minimal levels of materials onsite that have been defined as hazardous under 40 Code of Federal Regulations (CFR), Part 261. The following materials are expected to be used during the construction, operation, and long- term maintenance of the Project:

- Insulating oil: used for electrical equipment
- Lubricating oil: used for maintenance vehicles
- Various solvents and detergents: equipment cleaning
- Gasoline: used for maintenance vehicles

Hazardous materials and wastes would be managed, used, handled, stored, and transported in accordance with applicable local and state regulations. All hazardous wastes would be maintained at quantities below the threshold requiring a Hazardous Material Management Program (HMMP): one 55-gallon drum. Though not expected, should any onsite storage of hazardous materials exceed one 55-gallon drum, an HMMP would be prepared and implemented.

2.5.2 Spill Prevention and Containment

Less than 55 gallons of hazardous materials would be stored onsite. Spill prevention and containment for construction and operation of the Project would adhere to the Environmental Protection Agency's guidance on Spill Prevention Control and Countermeasures.

2.5.3 Wastewater/Septic System

A standard onsite septic tank and leach field may be used at the O&M building to dispose sanitary wastewater and would be designed to meet O&M guidelines required by local laws, ordinances, regulations, and standards.

2.5.4 Inert Solids

Inert solid wastes resulting from construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, type 1-4 plastics, drywall, wood, and lubricating oils. Non-recyclable items include insulation, other plastics, food waste, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. A construction waste management plan would be prepared for review by the County. Consistent with local regulations and the California Green Building Code, the plan would provide for diversion of a minimum of 50 percent of construction waste from landfill.

Chemical storage tanks (if any) would be designed and installed to meet applicable local and state regulations. Any wastes classified as hazardous, such as solvents, degreasing agents, concrete curing compounds, paints, adhesives, chemicals, or chemical containers, would be stored (in an approved storage facility/shed/structure) and disposed of as required by local and state regulations. Material quantities of hazardous wastes are not expected.

2.5.5 Health and Safety

Safety precautions and emergency systems would be implemented as part of the design and construction of the Project to ensure safe and reliable operation. Administrative controls would include classroom and hands-on training in O&M procedures, general safety items, and a planned maintenance program. These controls would work with the system design and monitoring features to enhance safety and reliability.

The Project would have an Emergency Response Plan (ERP) to address potential emergencies including chemical releases, fires, and injuries. All employees would be provided with communication devices, cell phones, or walkie-talkies to provide aid in the event of an emergency.

3.0 TRANSPORTATION SETTING

This section describes the traffic and transportation conditions in the vicinity of the Project site, including the operating condition of the roadways (streets and highways) that could be affected by the Project.

3.1 EXISTING ROADWAY SYSTEM

SR 65 is a rural two-lane highway with paved shoulders in the project vicinity. It runs in the north-south direction and bisects the project area. It provides access to the project area. SR 65 provides regional access to agricultural, industrial, and commercial land uses.

3.2 EXISTING TRAFFIC VOLUMES

This section summarizes existing traffic volumes on roadways that could be affected by the Project. All data were obtained from the California Department of Transportation (Caltrans) Traffic Census Program for the most recent available year (Caltrans 2017).

Segment Volumes

Table 2 summarizes the 24-hour annual average daily traffic (AADT) volumes, which is the total volume of vehicle traffic for the year divided by 365 days, at four study locations along SR 65. In addition, Table 2 summarizes the peak month average daily traffic (ADT) volumes, which is the average daily traffic for the month of heaviest traffic flow. The four study locations include the following roadway segments:

- SR 65 at Junction SR 155
- SR 65 at Kern/Tulare County Line
- SR 65 at Avenue 56
- SR 65 at Avenue 95

Table 2. Annual ADT Volumes on Potentially Affected Roadway Segments

Roadway Segment	AADT (Peak Month ADT)
SR 65 - MP 23.186 - Junction SR 155	6,900 (7,400)
SR 65 - MP 0.000 - Kern/Tulare County Line	6,900 (7,400)
SR 65 - MP 6.983 - Avenue 56	8,100 (9,200)
SR 65 - MP 11.860 - Avenue 95	11,900 (14,100)

Source: 2017 Traffic Volumes, Caltrans Traffic Census Program.
Notes:
ADT = average daily traffic
AADT = annual average daily traffic
MP = Mile Post
SR = State Route

Peak Hour Segment Volumes

Table 3 summarizes the peak hour volumes (PHV), which is the maximum number of vehicles that travel in a one-way direction along the roadway segment during a one-hour period. Accordingly, Table 3 shows PHV for the four study locations on SR 65, as well as the "K" and "D" factors. The "K" factor represents the percentage of the annual ADT for both directions of travel during the peak hour. The "D" factor represents the percentage of the peak hour traffic in the peak direction.

Table 3. Peak Hour Traffic Volumes on Potentially Affected Roadway Segments

Roadway Segment	PHV	%K	%D
SR 65 MP 23.186 - Junction SR 155	410 (NB PM)	9.43	63.54
SR 65 MP 0.000 - Kern/Tulare County Line	410 (NB PM)	9.43	63.54
SR 65 MP 6.983 - Avenue 56	490 (NB PM)	9.43	63.54
SR 65 MP 11.860 - Avenue 95	710 (NB PM)	9.43	63.54

Source: 2017 Peak Hour Volume Data, Caltrans Traffic Census Program.

Notes:

MP = Mile Post

NB = northbound

PHV = peak hour volume

SR = State Route

Level of Service Methodology

The Sixth Edition Highway Capacity Manual (HCM) is a standard reference published by the Transportation Research Board, contains specific criteria and methods for assessing Level of service (LOS). LOS is a qualitative measure of the performance of a transportation system element. The LOS for traffic is designated A through F, with LOS A representing free-flowing conditions and LOS F representing severe traffic congestion. LOS characteristics for roadway segments are presented in Table 4.

Table 4. Roadway Level of Service Descriptions

Level of Service	Traffic Flow Description
A	Minimal or no vehicle delay
B	Slight delay to vehicles
C	Moderate vehicle delays, traffic flow remains stable
D	More extensive delays at intersections
E	Long queues create lengthy delays
F	Severe delays and congestion

Significance Criteria

Tulare County uses a threshold of LOS D for the minimum acceptable operation of its transportation facilities. Facilities under the jurisdiction of Caltrans include freeway segments, ramps, ramp terminals, and arterials. Although Caltrans has not designated an LOS standard, Caltrans' Guide for the Preparation of Traffic Impact Studies indicates attempts to maintain the LOS of a state highway facility between the LOS C and D thresholds (Caltrans 2002).

For the purpose of this analysis, a LOS threshold of D was used to determine the significance of project impacts on traffic and transportation. The project would be considered to have a significant impact if it would cause the operation of a transportation facility to worsen from LOS D or better to LOS E or F, or to worsen conditions for facilities already operating at LOS E or F without the project.

Table 5 provides LOS and AADT volume thresholds for uninterrupted flow rural highways. Since Tulare County does not have established AADT volume thresholds for uninterrupted flow on rural highways, the volume thresholds noted here are based on the Florida Department of Transportation guidelines, a source commonly used by traffic engineers for analyses of this type. This is a modified Highway Capacity Manual based LOS table that was used in the analysis.

Table 5. Roadway Level of Service for Uninterrupted Flow Highways

Lanes	Median	A	B	C	D	E	F
2	Undivided	-	≤ 4,700	8,400	14,300	28,600	> 28,600
4	Divided	-	≤ 25,700	40,300	51,000	57,900	> 57,900
6	Divided	-	≤ 38,800	60,400	76,700	86,800	> 86,800

Source: Florida Department of Transportation 2012, Generalized Annual Average Daily Volumes for Florida's Rural Undeveloped Area and Developed Areas with less than 5,000 Population

4.0 EXISTING TRAFFIC CONDITIONS

This section assesses traffic conditions in the Project area without the Project.

4.1 LEVEL OF SERVICE

Existing traffic conditions for the four roadway segments shown in Table 2 were evaluated based on LOS criteria and AADT thresholds for uninterrupted flow rural highways, shown in Table 5.

Table 6 shows the maximum daily traffic volumes that would allow the highway segments to maintain an acceptable LOS D, the existing AADT and LOS. As shown, all the two-lane highway segments currently operate at an acceptable LOS D or better.

Table 6. Existing Level of Service of Study Segments

Roadway Segment	Facility Type	Allowable Daily Service Volume (LOS D)	AADT	LOS
SR 65 MP 23.186 - Junction SR 155	Two-Lane Rural Highway	14,300	6,900	C
SR 65 MP 0.000 - Kern/Tulare County Line	Two-Lane Rural Highway	14,300	6,900	C
SR 65 MP 6.983 - Avenue 56	Two-Lane Rural Highway	14,300	8,100	C
SR 65 MP 11.860 - Avenue 95	Two-Lane Rural Highway	14,300	11,900	D

Notes:
The Allowable Daily Service Volume was calculated for each location based on the unique peaking factors obtained from Caltrans.
ADT = average daily traffic
LOS = level of service
MP = Mile Post
SR = State Route

5.0 TRIP GENERATION

This section discusses trip generation and truck routing for the Project.

5.1 CONSTRUCTION TRIP GENERATION

Trip generation is defined as the number of vehicle trips produced by a particular type of land use or project. A trip is defined as vehicle movement in one direction. The total number of trips generated by each land use or project includes both inbound and outbound trips. During construction, trucks would travel primarily on SR 65 to access the Project area.

The Project would cover approximately 3,620 acres. Construction of the Project is expected to be completed in the following six phases:

- Phase 1: Site Preparation
- Phase 2: Grading and Earthwork
- Phase 3: Concrete Foundations
- Phase 4: Structural Steel Work
- Phase 5: Electrical/Instrumentation Work
- Phase 6: Collector Line Installation

The analysis of construction trip generation was prepared based on the average daily volume of construction traffic. The time period with the highest construction trip generation was found to be during the overlap of phases 3, 4, 5 and 6[2]. The highest construction trip generation for the Project is shown in Table 7. Appendix A shows the trip generation estimate in relation to the Project's construction schedule.

As shown, the Project is expected to generate a total passenger car equivalent (PCE) volume of approximately 1,226 ADT, which includes 1,075 passenger car trips and 70 heavy vehicle trips each day. Heavy vehicles trips are converted to PCE for this analysis.

Table 7. Highest Construction Trip Generation

	Acreage	ADT		
		Passenger Cars	Heavy Vehicles[1]	Total Trips[2]
Rexford Total	3,620	1,075	70	1,226

Notes:

1. Heavy vehicles consist of light-, medium-, and heavy-duty trucks, including heavy-duty diesel construction trucks.

2. PCE factor = 2.16; PCE = passenger car equivalent. Heavy vehicles are approximated as more than one passenger car due to their physical and mechanical characteristics, such as slower acceleration and stopping.

ADT = average daily traffic

[2] Based upon the construction schedule for the Rexford Solar Farm Project provided by 20SD 8me LLC.

5.2 OPERATIONS TRIP GENERATION

Once constructed, the solar facility would have up to 20 full-time employees, and the majority of the staff would work during the day shift. A conservative assumption is if all employees work during the day shift, it would result in approximately 50 trips per day for the full facility based on an average trip rate of 2.5 trips per employee[3], which is not perceptible and therefore is considered less than significant and would have no impact to the surrounding roadway network.

[3] The average trip rate of 2.5 trips per employee assumes that employee work during the day shift is 2 trips (in and out). Some employees may travel an additional trip in between (e.g., lunch, errand, etc.), therefore an average of 2.5 trip per employee is assumed.

6.0 EXISTING PLUS CONSTRUCTION CONDITIONS

This section describes the potential impacts of the Project on traffic and transportation during construction.

6.1 LEVEL OF SERVICE

Similar to the analysis of existing traffic conditions, the existing plus construction conditions for the roadway segments were evaluated based on LOS criteria and AADT thresholds for uninterrupted flow rural highways, shown in Table 5. The roadway capacities were estimated and compared to the existing plus construction traffic volumes. For this analysis, to evaluate the most conservative scenario for each roadway segment, 100 percent of the construction trips were assigned to each roadway segment individually as a worst-case scenario.

For all the two-lane highway segments, given the "K" and "D" factors previously discussed, the maximum daily traffic volume accommodated by the roadway to maintain the target LOS D, AADT and LOS is shown in Table 8. All the two-lane highway segments, with the most conservative scenario construction traffic added, operate at an acceptable LOS D or better.

Accordingly, with the addition of construction traffic on the study area roadway segments, the ADT would meet the LOS D thresholds, which indicates that there would be no significant Project impact on the roadway segments. Since the capacity analysis indicates that there would be no significant impacts on roadway segments based on the conservative assumption regarding construction trips, the impact of construction trips would be less than significant.

Table 8. Existing plus Construction Traffic LOS of Study Segments

Roadway Segment	Facility Type	Allowable Daily Service Volume (LOS D)	AADT	LOS
SR 65 MP 23.186 - Junction SR 155	Two-Lane Rural Highway	14,300	8,126	C
SR 65 MP 0.000 - Kern/Tulare County Line	Two-Lane Rural Highway	14,300	8,126	C
SR 65 MP 6.983 - Avenue 56	Two-Lane Rural Highway	14,300	9,326	D
SR 65 MP 11.860 - Avenue 95	Two-Lane Rural Highway	14,300	13,126	D

Notes:
ADT = average daily traffic
LOS = level of service
MP = Mile Post
SR = State Route
The Allowable Daily Service Volume was calculated for each location based on the unique peak factors obtained from Caltrans.

7.0 CONCLUSIONS

Under existing traffic conditions, all highway study segments currently operate at LOS D or better, which meets the target threshold of LOS D. As described in the Project Description, construction equipment and vehicles would access the Project site via SR 65. Accordingly, the most conservative overall daily trip generation (ADT with PCE) affecting SR 65 during construction is estimated to be 1,226 trips using a PCE factor 2.16 (as further described in Table 7).

During construction, two-lane highway study segments would continue to operate at the acceptable LOS D or better. With the addition of construction traffic on the study area roadway segments, the ADT would continue to meet the LOS D thresholds, which indicates that there would be no significant Project impact on the roadway segments. Since the capacity analysis indicates that there would be no significant impacts on roadway segments based on the conservative assumption regarding construction trips, the impact of construction trips would be less than significant. Construction of the Project is not expected to cause a significant impact to the surrounding transportation network.

After the construction, the solar facility would have up to 20 full-time employees that would generate approximately 50 trips per day which is not perceptible and therefore is considered less than significant and has no impact to the surrounding roadway network.

8.0 REFERENCES

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Appendix A TRIP GENERATION

Rexford - Overall ADT with PCE trips by Phase

Phase	Description	Work Days	2021			2022												2023								
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Site Preparation	76	154	154	154	154																				
2	Grading and Earthwork	105			454	454	454	454	454																	
3,4,5	Foundations, Steel, Electrical	357								1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119
6	Collector line installation	47																						107	107	107
	Total		154	154	608	608	454	454	454	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,226	1,226	1,226

Rexford - Heavy Vehicle ADT by Phase

Phase	Description	Work Days	2021			2022												2023								
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Site Preparation	76	25	25	25	25																				
2	Grading and Earthwork	105			25	25	25	25	25																	
3,4,5	Foundations, Steel, Electrical	357								55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
6	Collector line installation	47																						15	15	15
	Total		25	25	50	50	25	25	25	55	55	55	55	55	55	55	55	55	55	55	55	55	55	70	70	70

Rexford - Passenger Car ADT by Phase

Phase	Description	Work Days	2021			2022												2023								
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Site Preparation	76	100	100	100	100																				
2	Grading and Earthwork	105			400	400	400	400	400																	
3,4,5	Foundations, Steel, Electrical	357								1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
6	Collector line installation	47																						75	75	75
	Total	585	100	100	500	500	400	400	400	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,075	1,075	1,075

APPENDIX K
WATER SUPPLY ASSESSMENT

Rexford Solar Project

Water Supply Assessment

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January 2020

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Acronyms and Abbreviations

AFY	acre-feet per year
AC	alternating current
CASGEM	California Statewide Groundwater Elevation Model
CEQA	California Environmental Quality Act
CUP	Conditional Use Permit
CVP	Central Valley Project
Delta	Sacramento-San Joaquin Rivers Delta
DI	deionization
DWR	California Department of Water Resources
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IRWMP	Integrated Regional Water Management Plan
KCWA	Kern County Water Agency
KGA	Kern Groundwater Authority
KTWD	Kern-Tulare Water District
MW	megawatts
O&M	operations and maintenance
RO	reverse osmosis
RWMG	Regional Water Management Group
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
SWP	State Water Project
TDS	total dissolved solids
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

1 Introduction

In 2001, California adopted Senate Bill (SB) 610 and SB 221, amending California Water Code to require that certain types of development projects provide detailed assessments of water supply availability and reliability to city and county decision-makers prior to project approval. These Water Supply Assessments (WSAs) identify water supply for an identified project over a 20-year projection under varying climactic (drought) conditions. The primary purpose of these requirements is to promote collaborative planning between local water supply and land use decisions.

SB 610 was not originally clear on whether renewable energy developments are subject to SB 610 and require the preparation of a WSA. SB 267 was signed into law on October 8, 2011, amending California's Water Law to revise the definition of "project" specified in SB 610. Under SB 267, wind and photovoltaic projects that consumed less than 75 acre-feet per year (AFY) of water were not considered to be a "project" under SB 610; subsequently, a WSA would not be required for this type of project. However, the renewable energy exclusions provided by SB 267 expired in January 2017. Because the language of SB 610 remains unclear on whether renewable energy projects meet the definition of a "project," this WSA takes a conservative approach and considers renewable energy projects to be subject to the requirements of SB 610.

Water requirements associated with the Rexford Solar Project ("Project" or "Proposed Project") are described in Section 1.1 of this WSA. The Proposed Project would source water from one or more of the following water sources: an on- or off-site groundwater well pumping water from the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin, and/or imported surface water purchased from a local retailer. Potential water sources for the Proposed Project are evaluated in Section 4 of this WSA. In accordance with California Water Code, a WSA must examine the availability of an identified water supply under normal-year (no drought), single-dry-year (limited drought), and multiple-dry-year (extended drought) conditions, over a 20-year projection. The WSA must account for the projected water demand of the Proposed Project in addition to other existing and planned future uses of the identified water supply, including agricultural and manufacturing uses, to the extent of available information. A common lack of data for groundwater usage and replenishment rates often makes it difficult to estimate baseline conditions regarding water supply availability; therefore, where data is not available to make quantitative estimates of water supply, reasonable assumptions are made based on available information and data.

The steps followed to ensure compliance of this WSA with California Water Code are described in Attachment A (California Department of Water Resources [DWR] Guidebook for Implementation of SB 610 and SB 221).

2 Project and Property Description

2.1 Location

The Project Area encompasses approximately 3,620 gross acres in unincorporated Tulare County. The permanent disturbance acreage associated with development of the solar facility and associated infrastructure within the Project Area would be less than the gross acreage of the Project Area. Figure 1 shows a map of the Project Area.

The Project Area overlies the Tule Subbasin of the San Joaquin Valley Groundwater Basin; the Kern County Subbasin is located approximately two miles to the south. Figure 2 shows a map of the Project Area in relation to the Tule and Kern County Subbasins.

A small portion of the Project Area is located within the Kern-Tulare Water District (KTWD) (Tulare County Local Agency Formation Commission 2016). Figure 3 shows a map of the Project Area in relation to KTWD's service area and sphere of influence.

2.2 Description of Project

The Proposed Project would generate up to 700 megawatts (MW) of alternating current (AC) photovoltaic (PV) solar energy and up to 700 MW-AC of storage capacity. The Proposed Project may construct an operations & maintenance (O&M) building and/or transmission facilities, as necessary, or may share an O&M building and/or transmission facilities with one or more nearby or future solar projects, and/or may be remotely operated. Any unused O&M building, substation, and/or transmission facility areas noted on the site plan may be covered by solar panels or an energy storage system under such scenarios.

After the useful life of the Project, the panels would be disassembled from the mounting frames and the Project Area would be restored to its pre-development condition.

The Project applicant seeks approval of a Conditional Use Permit (CUP) for the Proposed Project. Water demands associated with the construction and operation of these Project components are discussed below, in Section 2.3, *Water Demands.* For the purposes of this WSA, it is anticipated that the Proposed Project's water supply will be obtained from on- or off-site groundwater resources, and/or imported water purchased from a local retailer.

2.2.1 PV Module Configuration

The Proposed Project would utilize solar PV panels or modules on mounting frameworks to convert sunlight directly into electricity. In order to maintain efficiency of the PV panels, they would be cleaned of accumulated dust and debris on a semi-annual basis, or as needed depending on weather conditions. Operational water demands associated with operation and maintenance of the PV panels follow, in Section 2.3.2.

2.2.2 Inverter Stations

PV energy would be delivered via cable to inverter stations, generally located near the center of each block of PV modules. No water demand is associated with operation of the inverter stations.

2.2.3 Energy Storage System

The Project may include one or more Energy Storage System, located at or near a substation/switchyard. The Energy Storage System would consist of modular and scalable battery packs and battery control systems. No water demand is associated with operation of such Energy Storage System.

2.2.4 Substation

Output from the inverter stations would be transferred via electrical conduits and electrical conductor wires to one or more substations or switchyards. No water demands are associated with operation of the substation.

2.2.5 Transmission Line

From the substation, power would be transmitted to Southern California Edison's Vestal Substation via an up to 230-kilovolt overhead and/or underground gen-tie line. No water demands are associated with operation of the transmission line.

2.2.6 RO/DI Water Treatment System

Operational water used for panel washing to maximize energy efficiency may need to be treated prior to application on the solar panels. This is because high concentrations of total dissolved solids (TDS) in wash water can leave behind a residue that also decreases panel efficiency. Therefore, high-TDS water needs treatment prior to use for panel washing. For the purposes of this analysis, it is assumed a combined reverse osmosis (RO) and deionization (DI) system would be used to treat the water used for panel washing.

2.2.7 Water Storage Tank(s)

One or more above-ground water storage tanks with a capacity of up to 50,000 gallons each may be placed on site, near the O&M building. For the purposes of this analysis, it is conservatively assumed up to five 50,000-gallon water storage tanks would be placed and maintained at the Project Area, storing a total of 250,000 gallons (approximately 0.8 acre-feet). It is also conservatively assumed that all water in these tanks would be replaced on an annual basis. The storage tanks would have the appropriate fire department connections so they could be used for fire suppression on an as-needed emergency basis.

2.2.8 Operations and Maintenance Building

The Project may include an O&M building with associated on-site parking. For the purpose of being conservative in operational water supply analysis, it is assumed that an O&M building would be installed, and would include the following:

- Office
- Repair building/parts storage
- Control room
- Restroom
- Septic tank and leach field

Water demands associated with the O&M building are described in Section 2.3.2.

Figure 1 Project Area

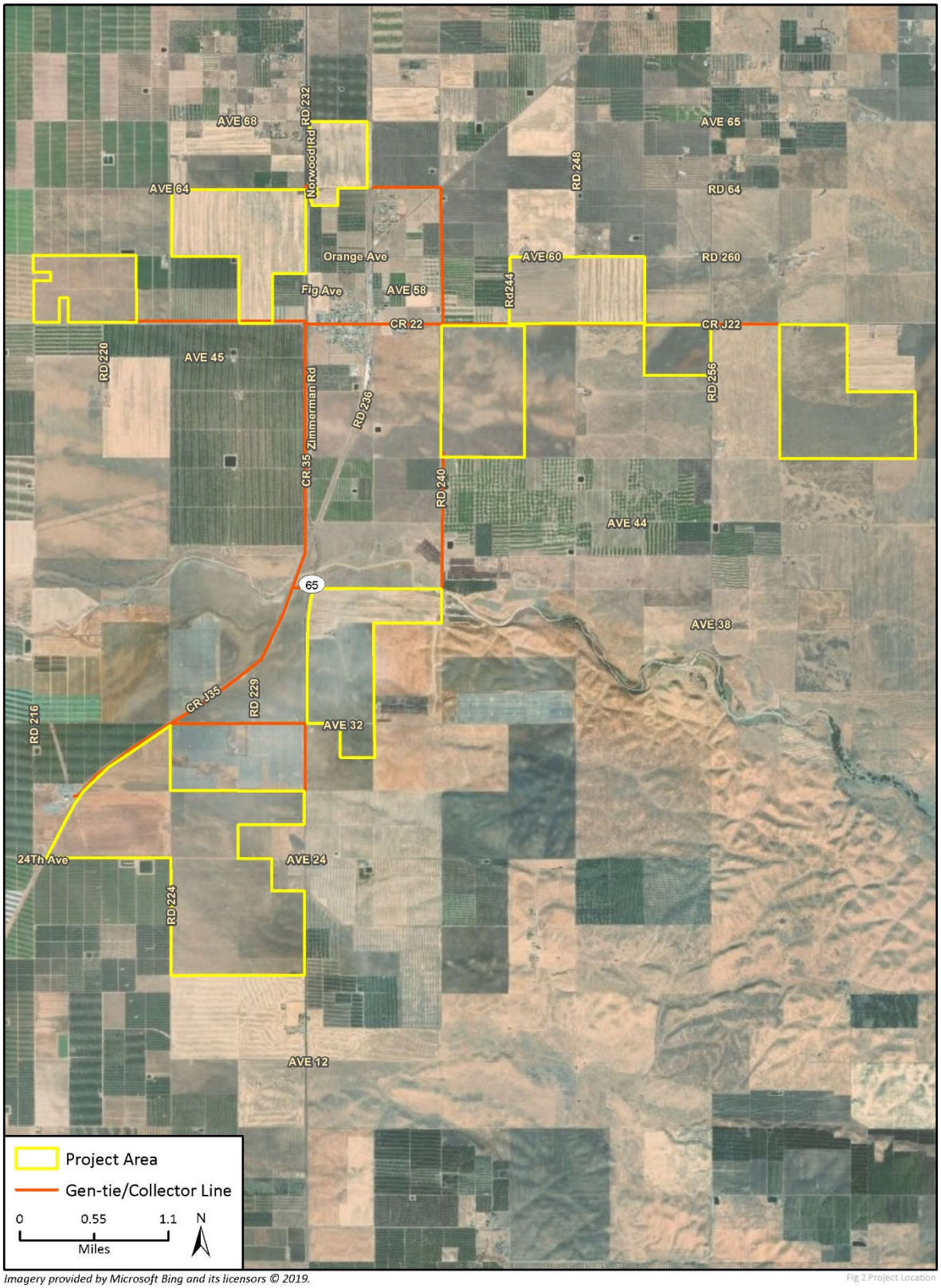

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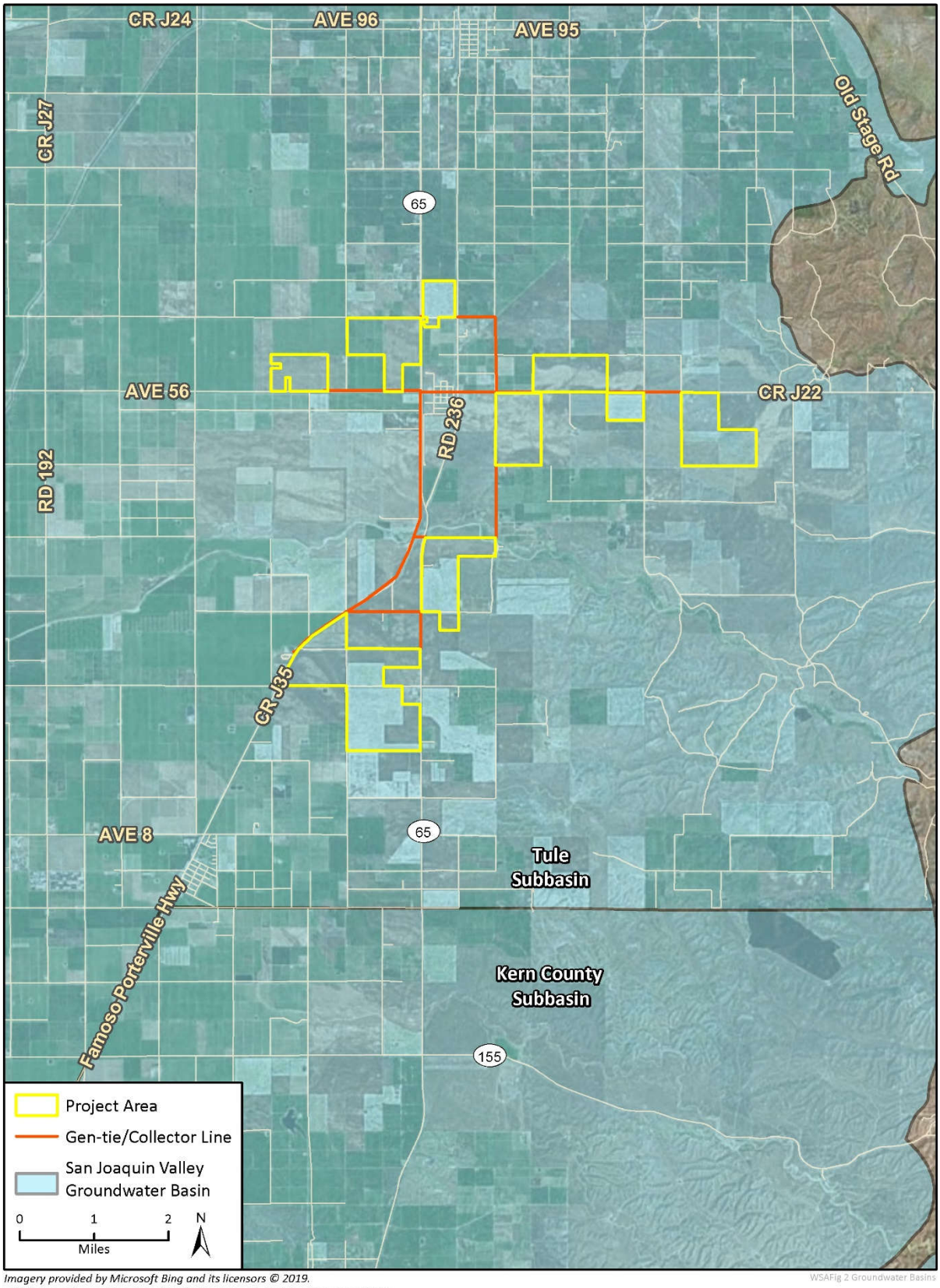
Fig 2 Project Location

Figure 2 Groundwater Basins



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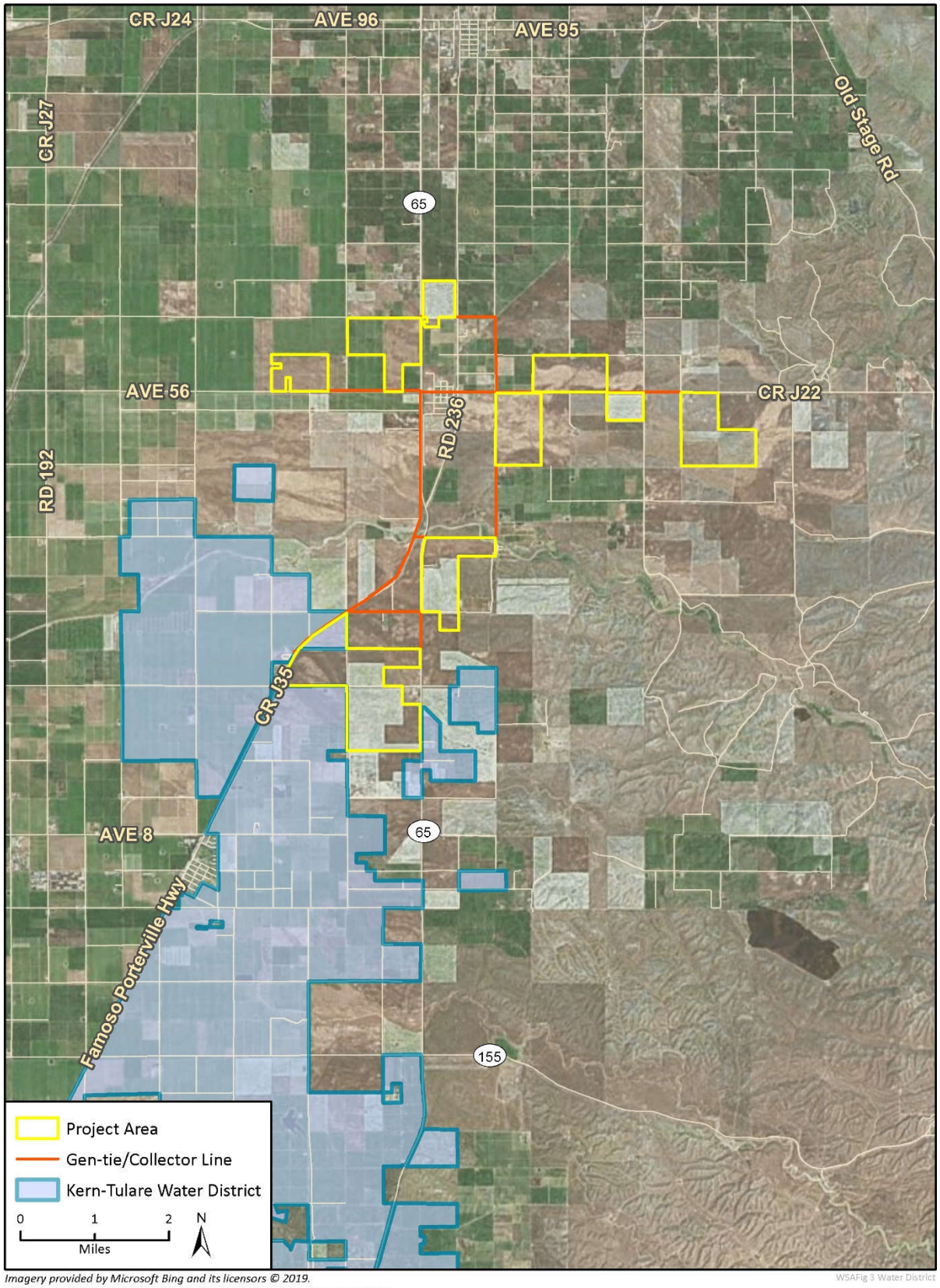
Additional data provided by California Department of Water Resources, 2018.

WSAFig 2 Groundwater Basins

Figure 3 Kern-Tulare Water District Service Area and Sphere of Influence



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Additional data provided by California Department of Water Resources, 2018.

WSAFig 3 Water District

2.3 Water Demands

The Proposed Project would use water for construction and operation activities. The following sections outline the assumptions applied for water demand calculations and characterize the water demands anticipated over the lifespan of the Proposed Project.

2.3.1 Construction Water Assumptions

The construction period for the Project, from site preparation through construction, testing, and commercial operation, would extend for approximately 12 to 24 months.

During the construction period, the Proposed Project would require water for dust suppression, truck wheel washing, landscaping, and miscellaneous purposes. According to construction plans and engineering team input, the Proposed Project would require up to 400 acre-feet of water throughout the construction period.

It is assumed drinking water for construction personnel would be provided in bottles trucked to the Project Area. During construction, restroom facilities would be provided as portable units to be serviced by licensed providers, and would therefore not require an on-site water source. In addition, it is assumed that concrete required for Project features such as but not limited to the footings for solar PV modules would be purchased from a local retailer who would provide the mixed concrete or would use trucks to mix concrete on site.

2.3.2 Operational Water Assumptions

During operation of the Proposed Project, it is anticipated that water supply would be required for as-needed fire suppression, solar PV panel washing, and O&M building support. Water demands associated with these Project features are discussed below.

Fire Suppression

As noted in Section 2.2, *Description of Project,* up to five water storage tanks would be placed on the Project Area to store water for fire suppression use on an as-needed basis. Each water storage tank would have capacity for up to 50,000 gallons. It is unlikely the entire contents of each 50,000-gallon water tank would be needed for fire suppression on an annual basis, but for the purposes of this analysis it is conservatively assumed the water in each 50,000-gallon tank would be replaced annually, for a total of 0.8 AFY. Some water stored in the tanks would be lost to evaporation regardless of fire suppression needs. Excess water may also be used for dust suppression during Project operation and maintenance activities.

Solar PV Panel Washing

Industrial RO systems typically run between 50 and 85 percent recovery, depending on the feed water characteristics and other design considerations (PureTec Industrial Water 2019). Recovery is the amount of water permeated per unit time, typically measured in gallons per minute and expressed as a percentage of the source water flow rate. In other words, an 85 percent recovery rate means that 85 percent of the amount of water fed into a system is produced as treated water, and 15 percent is produced as concentrate, or waste, for disposal. Source water that has higher concentrations of water quality constituents results in lower recovery rates from a RO/DI system.

Operational water demands may be met via groundwater from the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin. Some areas of the groundwater basin experience high concentrations of TDS. Consequently, for the purposes of this analysis, it is conservatively assumed the RO recovery rate for the Proposed Project will be approximately 50 percent. As such, for every 100 gallons of source water that enters the Proposed Project RO/DI system, 50 gallons will be produced as clean wash water, and 50 gallons will be produced as concentrate for disposal.

O&M Buildings

The Proposed Project may include an O&M building. For the purposes of this analysis, it is conservatively assumed the site will include an on-site O&M building sized approximately 40 feet by 80 feet.

2.3.3 Project Water Demands

During the construction period of up to 24 months, the Proposed Project would use up to approximately 400 acre-feet of water for construction activities. Operational water demands, which include water used for fire suppression, solar PV panel washing and concentrate, and operation of the proposed O&M building, would total approximately 50 AFY, according to engineering team input.

Table 1 summarizes the construction and operational water demands of the Proposed Project.

Table 1 Project Water Use Scenarios

Project Phase	Water Demand (AFY)
Construction Demand[1]	200
Operational Demand	50
Amortized Annual Demand	
Total Annual Demand Amortized Over 35-Year Lifespan	61.4

AFY: acre-feet per year

[1] Construction would occur over a period of up to two years, totaling 400 acre-feet in construction water demand.

As shown in Table 1, the Proposed Project's amortized annual water demand (i.e., the average annual water demand over the 35-year lifespan of the Proposed Project) is estimated to be approximately 61.4 AFY.

3 Senate Bill 610 Applicability

This regulatory setting discussion is specific to the assessment of water supply availability, as required by SB 610 which became effective in 2002 and amended California Water Code to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies, and guaranteeing land use decisions for certain large development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a WSA for a project that is subject to CEQA and meets certain requirements, each of which is discussed below.

California Water Code, as amended by SB 610, requires a WSA address the following questions:

- Is there a public water system that will service the proposed project? (see Section 3.3)
- Is there a current Urban Water Management Plan (UWMP) that accounts for the project demand? (see Section 3.4)
- Is groundwater a component of the supplies for the project? (see Section 3.5)
- Are there sufficient supplies to serve the project over the next twenty years? (see Section 3.6)

The primary question to be answered in a WSA is:

> *Will the total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to existing and planned future uses of the identified water supplies, including agricultural and manufacturing uses?*

The following sections address the SB 610 WSA questions as they relate to the Proposed Project.

3.1 Is the Proposed Project Subject to CEQA?

California Water Code Section 10910(a) states any city or county that determines a project, as defined in Section 10912, is subject to CEQA must prepare a WSA. Projects requiring an issuance of a discretionary permit by a public agency, projects undertaken by a public agency, and projects funded by a public agency are subject to CEQA. The Proposed Project requires issuance of a discretionary permit (CUP) from the County of Tulare and is therefore subject to CEQA.

3.2 Is the Proposed Project a "Project" Under SB 610?

California Water Code Section 10912(a) states any proposed action that meets the definition of "project" under SB 610 is required to prepare a WSA to demonstrate whether sufficient water supplies are available to meet requirements of the proposed project under normal and drought conditions. Water Code Section 10912 defines a "project" as any one of six different development types with certain water use requirements. Each identified development type and associated water requirements is addressed below.

3.2.1 Residential Development

A proposed residential development of more than 500 dwelling units is defined as a "project" under SB 610. The Proposed Project is not a residential development.

3.2.2 Shopping Center or Business Establishment

A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space is defined as a "project" under SB 610. The Proposed Project is not a shopping center or business establishment.

3.2.3 Commercial Office Building

A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space is defined as a "project" under SB 610. The Proposed Project is not a commercial office building.

3.2.4 Hotel or Motel

A proposed hotel or motel, or both, having more than 500 rooms is defined as a "project" under SB 610. The Proposed Project is not a hotel or motel.

3.2.5 Industrial, Manufacturing, or Processing Plant or Industrial Park

A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area is defined as a "project" under SB 610.

The Proposed Project is not a manufacturing plant, processing plant, or industrial park. However, it is an industrial facility occupying more than 40 acres and therefore this analysis conservatively determined the Proposed Project to be considered a "project" under Water Code Section 10912. Therefore, this WSA has been prepared to satisfy the requirements of SB 610.

3.3 Is There a Public Water System that Will Serve the Proposed Project?

California Water Code Section 10912 defines a "public water system" as a system that has 3,000 or more service connections and provides piped water to the public for human consumption. The Proposed Project would source water from one or more of the following water sources: pumped from an on- or off-site groundwater well in the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin or purchased imported water from the Kern-Tulare Water District. The Kern-Tulare Water District provides water supplies for agricultural irrigation purposes, but is not a public water system.

There is not a public water system that will serve the Proposed Project.

3.4 Is There a Current UWMP that Accounts for the Project Demand?

California's urban water suppliers prepare UWMPs to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-, single-dry, and multiple-dry year scenarios. These are the same requirements of a WSA, as specified by SB 610. UWMPs must be updated and submitted to DWR every five years for review and approval (DWR 2016).

The Project Area is not located within the management planning area of an existing UWMP.

3.5 Is Groundwater a Component of the Supplies for the Project?

The Project applicant may pump groundwater from the Tule or Kern County Subbasins in the San Joaquin Valley Groundwater Basin. Groundwater supplies are discussed in Section 4.1.

3.6 Are There Sufficient Supplies to Serve the Project Over the Next Twenty Years?

The sufficiency of water supplies identified as potential sources to serve the Proposed Project is assessed in the following sections. Water resources in the Project Area are described in Section 4, *Water Sources*. Water supply reliability is discussed in Section 5, *Water Supply Reliability*.

The information and analysis provided in this WSA support the conclusion that there are sufficient water supplies in the Project Area to meet the needs of the Proposed Project over the next 20 years (the assessment period required per SB 610 for a WSA), as well as the next 35 years (the anticipated lifespan of the Project). Conclusions associated with the sufficiency of available water supplies are discussed in Section 6, *Impact Conclusions*.

4 Water Sources

The Proposed Project would source water from one or more of the following water sources: an on- or off-site groundwater well pumping water from the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin and/or purchased water from the KTWD. The following sections characterize the potential water sources and examine their capacity to meet the construction and operational demands of the Project.

4.1 San Joaquin Valley Groundwater Basin

The Project Area is located in the southeastern portion of the San Joaquin Valley Groundwater Basin. The northern portion of the San Joaquin Valley drains toward the Sacramento-San Joaquin Rivers Delta ("Delta") by the San Joaquin River and its tributaries. The southern portion of the valley is internally drained by the Kings, Tule, and Kern Rivers that flow into the Tulare drainage basin (DWR 2004).

The Proposed Project's water demands may be met with groundwater pumped from on- or off-site well(s) tapping into the Tule or Kern County Subbasins of the San Joaquin Valley Groundwater Basin.

4.1.1 Tule Subbasin

The Project Area overlies the Tule Subbasin, as identified by DWR in Bulletin 118 as Subbasin No. 5.22-13. The following sections characterize the hydrogeology and management of the Tule Subbasin.

Groundwater Basin Characteristics

The Tule Subbasin is located primarily in southern Tulare County with a small portion in Kern County. The Subbasin spans approximately 467,000 acres (733 square miles) and is bounded as follows: on the west by the Tulare County line and the boundary to the Tulare Lake Subbasin; on the north by the northern boundaries of Lower Tule Irrigation District and Porterville Irrigation District, along the boundary of the Kaweah Groundwater Subbasin; on the east at the edge of the alluvium and crystalline bedrock of the Sierra Nevada foothills; and to the south at the Tulare-Kern County line. The Tule River, Deer Creek, and White River empty into the Tulare Lake bed and serve as the major drainages in the Subbasin (DWR 2004).

Water Bearing Formations

The Tule Subbasin's aquifer is comprised of continental deposits of Tertiary and Quaternary age (Pliocene to Holocene). These include flood-basin deposits, younger alluvium, older alluvium, the Tulare Formation, and undifferentiated continental deposits. The Tule Subbasin's estimated average specific yield is 9.5 percent (DWR 2004).

There are five general aquifer/aquitard units in the subsurface beneath the Tule Subbasin:

1. Upper Aquifer
2. The Corcoran Clay Confining Unit
3. Lower Aquifer

4. Pliocene Marine Deposits (generally considered an aquitard)
5. Santa Margarita Formation and Olcese Formation of the Southeastern Subbasin (Eastern Tule Groundwater Sustainability Agency [Eastern Tule GSA] 2019)

Restrictive Structures

Groundwater flows westward through the Subbasin and is not impeded by horizontal groundwater barriers. Groundwater contours diverge from the path of the Tule and White Rivers in the northern and southern portions of the Subbasin, respectively, suggesting that these drainages act as losing streams (DWR 2004).

The physical bottom of the Tule Subbasin is defined by the interface between the Tertiary sedimentary deposits and the relatively impermeable granitic bedrock below them. However, the physical bottom of the Subbasin is deeper than the bottom of the freshwater aquifer. The TDS concentration of the groundwater generally increases with increasing depth such that below a certain level, the groundwater is not suitable for municipal, irrigation or other beneficial uses. In the Tule Subbasin, the freshwater/brackish water interface is generally 1,500 to 3,000 feet below land surface (Eastern Tule GSA 2019).

Recharge and Connectivity

In the Tule Subbasin, groundwater recharge occurs in stream channels, unlined canals, managed recharge basins, and areas with irrigated agriculture (Eastern Tule GSA 2019).

Water Quality

Groundwater quality varies across the Tule Subbasin and with depth in the aquifer system. Overall, groundwater quality is considered to be very good. Groundwater quality concerns include both non-point sources of groundwater quality degradation, such as agricultural pesticide application, and point-source contaminant issues, such as leaking underground storage tanks (Eastern Tule GSA 2019).

The primary non-point constituent of concern is nitrate. Historical nitrate concentrations in the Subbasin range from non-detectable levels to greater than 300 milligrams per liter. The highest nitrate concentrations occur in shallow groundwater in the northwestern portion of the Subbasin (Eastern Tule GSA 2019).

Point-source contaminants in the Subbasin include petroleum hydrocarbons, metals, volatile organic compounds, pesticides, herbicides, and cyanide. Groundwater contaminant plumes associated with these point-source constituents tend to be highly localized (Eastern Tule GSA 2019).

Groundwater Level Trends

Despite a relatively wet hydrologic period between 1995 and 1999 and periodic wet years (2005 and 2011), groundwater levels in upper aquifer wells show a persistent downward trend between approximately 1987 and 2017. In the southern part of the Subbasin, in which the Project Area is located, groundwater levels were relatively stable between 1987 and 2007 but began declining after 2007. The Tule Subbasin has an estimated average overdraft of 160,000 AFY, which has led to issues such as groundwater depression zones and land subsidence (Eastern Tule GSA 2019).

Table 2 summarizes the Tule Subbasin's groundwater pumping and outflows from 1987 to 2017.

Table 2 Tule Subbasin Groundwater Production, 1987-2017 (acre-feet)

Water Year[1]	Groundwater Pumping				Subsurface Outflow	Total Groundwater Out
	Municipal	Irrigated Agriculture	Exports	Groundwater Banking Extraction		
1987	13,500	724,000	6,550	-	61,000	**805,000**
1988	15,100	768,000	34,180	-	53,000	**570,000**
1989	16,300	728,000	38,290	-	51,000	**833,000**
1990	16,700	838,000	50,430	-	53,000	**958,000**
1991	17,000	799,000	46,300	-	61,000	**923,000**
1992	17,200	817,000	41,250	-	52,000	**927,000**
1993	17,600	496,000	14,550	-	73,000	**601,000**
1994	17,600	791,000	11,220	-	59,000	**879,000**
1995	17,600	574,000	1,320	-	61,000	**654,000**
1996	17,800	508,000	-	-	65,000	**591,000**
1997	18,700	567,000	-	-	65,000	**651,000**
1998	17,900	630,000	-	-	62,000	**710,000**
1999	18,000	620,000	-	-	62,000	**700,000**
2000	18,900	651,000	7,720	-	60,000	**738,000**
2001	19,700	719,000	30,600	-	60,000	**829,000**
2002	20,900	713,000	44,520	-	58,000	**836,000**
2003	20,600	610,000	33,660	-	55,000	**719,000**
2004	21,700	656,000	37,790	-	55,000	**770,000**
2005	20,600	479,000	11,720	-	66,000	**577,000**
2006	21,600	490,000	150	-	64,000	**576,000**
2007	22,700	746,000	49,500	-	54,000	**872,000**
2008	23,000	637,000	50,090	-	68,000	**778,000**
2009	22,500	660,000	48,860	550	78,000	**810,000**
2010	21,800	483,000	28,530	70	92,000	**625,000**
2011	21,800	514,000	8,060	-	86,000	**630,000**
2012	22,500	730,000	43,570	3,860	76,000	**876,000**
2013	22,700	790,000	63,640	5,990	68,000	**950,000**
2014	21,900	900,000	58,030	5,590	69,000	**1,055,000**
2015	19,700	890,000	53,270	1,150	64,000	**1,028,000**
2016	19,700	614,000	50,000	70	70,000	**754,000**
2017	20,100	429,000	11,330	-	90,000	**550,000**

[1] Depicts Water Year ending in year shown

Source: Eastern Tule GSA 2019

As shown in Table 2, groundwater produced from the Tule Subbasin is primarily used for irrigated agriculture. Between 1987 and 2017, the Tule Subbasin lost an average of 777,000 AFY in groundwater pumping and natural outflow. During this same period, the Tule Subbasin gained an average 617,000 AFY in natural and artificial recharge. Consequently, the Subbasin experienced an annual net loss of approximately 160,000 AFY in stored groundwater (Eastern Tule GSA 2019). This suggests the presence of overdraft conditions.

Groundwater Supply Management

The Tule Subbasin is not adjudicated; therefore, there are no pumping restrictions in place for groundwater wells in the Subbasin. However, there are groundwater management regulations and plans for the Subbasin that are implemented towards the goals of achieving and maintaining sustainability of the groundwater supply and quality. An overview of these regulations and plans is discussed below.

Sustainable Groundwater Management Act

In September 2014, California Governor Jerry Brown signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA) into law. SGMA establishes a framework for local groundwater management and requires local agencies to bring overdrafted basins into balanced levels of pumping and recharge. The California Statewide Groundwater Elevation Model (CASGEM) Priority List ranks groundwater basins across the state with assessment rankings of High, Medium, Low, or Very Low. DWR identifies the Tule Subbasin as a High Priority, critically overdrafted groundwater basin (Eastern Tule GSA 2019), as evidenced by the groundwater level trends identified above.

To satisfy the requirements of SGMA, six activities are required for the Tule Subbasin:

1. One or multiple Groundwater Sustainability Agencies(s) (GSA) must fully cover the Tule Subbasin, beginning June 30, 2017;
2. One or more Groundwater Sustainability Plan(s) (GSP) must be developed and adopted by the GSA(s) and fully cover the Tule Subbasin, beginning January 31, 2020;
3. If multiple GSPs are adopted within the Tule Subbasin, they must be coordinated via Coordination Agreement by the time they are submitted to DWR, no later than January 31, 2020;
4. DWR must determine that the GSP(s) is/are “adequate” and satisfy the requirements set forth in SGMA;
5. All adopted GSPs covering the Tule Subbasin must be implemented in a manner that achieves the Tule Subbasin’s sustainability goal and avoids significant and unreasonable undesirable results; and
6. GSAs must provide regular reporting to the DWR, pursuant the requirements outlined in SGMA.

The Tule Subbasin includes seven GSAs that have coordinated efforts per SGMA regulations. Each GSA is preparing a separate GSP. Collectively, the GSPs will be implemented to manage the Tule Subbasin in accordance with SGMA.

Eastern Tule Groundwater Sustainability Plan

The Project Area is located within the jurisdiction of the Eastern Tule Groundwater Sustainability Agency Joint Powers Authority (Eastern Tule GSA), which is one of the seven GSAs with jurisdiction over the Tule Subbasin and authorized to develop and implement a GSP. The Eastern Tule GSP describes the Eastern Tule GSA's jurisdictional area and provides sustainable management criteria that consider the interests of all beneficial uses and users of groundwater within the management area. The Eastern Tule GSP includes descriptions of the Tule Subbasin's features including:

- Geophysical characteristics;
- Water budget (historical and future);
- Specific monitoring locations;
- Quantifiable targets and minimum thresholds for depth to groundwater;
- Groundwater storage;
- Groundwater quality; and
- Land subsidence projections between 2020 and 2040 (Eastern Tule GSA 2019).

Information from the Eastern Tule GSA's GSP for the Tule Subbasin is incorporated into this WSA.

Tule River Basin Integrated Regional Water Management Plan

The Regional Water Management Planning Act (SB 1672) was passed by the California Legislature in 2002, authorizing a regional water management group to prepare and adopt an integrated regional water management plan (IRWMP). The Project Area is located in the southeastern portion of the Tule River Basin IRWMP management area.

The Tule River Basin Regional Water Management Group (RWMG) consists of local water districts, community service districts, public utility districts, flood control districts, water companies, and other stakeholders in the Tule River Basin. In June 2018, the Tule River Basin RMWG released the Tule River Basin IRWMP, which details how the area's management methodologies will improve water supplies, water quality, and habitat in the management area. The IRWMP also identifies methodologies for improving management of flood and drought-related events, as well as detailing how efforts related to land use planning will be coordinated with water resources planning (Tule River Basin RWMG 2018).

Information from the Tule River Basin IRWMP is incorporated into this WSA.

4.1.2 Kern County Subbasin

The Project Area is located approximately two miles north of the boundary to the Kern County Subbasin, as identified by DWR in Bulletin 118 as Subbasin No. 5.22-14. It is anticipated that groundwater pumped from the Kern County Subbasin may be used to support the Project. Therefore, the following sections characterize the hydrogeology and management of the Tule Subbasin.

Groundwater Basin Characteristics

The Kern County Subbasin is located within the southernmost portion of the Tulare Lake Hydrologic Region of the San Joaquin River Basin. The Subbasin spans approximately 1,792,000 acres (2,800 square miles) and is bounded as follows: on the east by the Sierra Nevada; on the south by the Tehachapi mountains, San Emigdio mountains, and White Wolf Subbasin; on the west by the Coast

Range (Temblor Range); and to the north by the Kettleman Plain (5-022.17), Tulare Lake (5-022.12), and Tule (5-022.13) Subbasins (DWR 2006).

Water Bearing Formations

The Kern County Subbasin's aquifer is comprised of continental deposits of Tertiary and Quaternary age. From oldest to youngest, the deposits include: the Olcese and Santa Margarita Formations; the Tulare Formation; the Kern River Formation; older alluvium/stream deposits; and younger alluvium and coeval flood basin deposits. Specific yield values range from 5.3 to 19.6 percent across the Subbasin (DWR 2006).

Restrictive Structures

Groundwater movement across the Subbasin is restricted by fault lines (Edison, Pond-Poso, and White Wolf faults), folds (Elk Hills and Buena Vista Hills), angular non-conformities, Corcoran Clay, and crystalline and consolidated sedimentary rocks (DWR 2006).

Recharge and Connectivity

In the Kern County Subbasin, groundwater recharge occurs primarily from applied irrigation water. Natural recharge also occurs via stream seepage along the east and in the Kern River (DWR 2006).

In the absence of pumping or significant barriers, groundwater naturally flows from high elevation points of recharge to lower elevation points with less recharge. In general, groundwater flow diverges to the north and south away from natural and managed recharge points along the Kern River (GEI 2019).

Water Quality

The most common water quality issues within the Kern County Subbasin are: nitrate, arsenic, boron, hexavalent chromium, dibromochloropropane, 1,2,3-trichloropropane, and TDS. These constituents come from both anthropogenic and natural sources within the region (GEI 2019).

TDS is comprised of several dissolved minerals (calcium, phosphates, nitrates, sodium, potassium, and chloride), most of which have minimal impact on beneficial uses of the groundwater. However, TDS is a constituent of concern for solar panel washing, as it can leave a residue of particulate matter on the solar panels that decreases their efficiency. Throughout the Kern County Subbasin, sources of salinity include a combination of naturally occurring marine deposits; infiltration from produced water disposal ponds; perched water subject to evaporative pumping; or agricultural drainage ponds. A 2012 study showed a positive correlation between agricultural activities and TDS levels across the Subbasin. The highest TDS levels were found in the western portion of the Subbasin, farther away from the Project Area (GEI 2019).

Groundwater Level Trends

Land uses in the Kern County Subbasin are predominantly agricultural. The highest groundwater well densities can be found in the central portion of the Subbasin (GEI 2019).

Groundwater elevation patterns in the Kern County Subbasin show seasonal responses from pumping and recharge operations. Overall, the majority of the Subbasin has experienced long-term decline in groundwater level. Severe drought conditions from 2012 through 2016 resulted in significant declines in groundwater levels across the Subbasin. Groundwater levels recovered in

2017. In general, groundwater levels in the Kern County Subbasin decline during below normal water years and begin to recover during above normal water years (GEI 2019).

Table 3 summarizes the Kern County Subbasin's groundwater pumping and outflows from 1995 to 2014.

Table 3 Kern County Subbasin Groundwater Production, 1995-2014 (acre-feet)

Water Year[1]	Groundwater Pumping	Subsurface Outflow
1995	946,782	75,299
1996	1,247,471	84,675
1997	1,068,169	87,372
1998	884,593	87,515
1999	1,109,310	85,211
2000	1,375,733	83,759
2001	1,839,000	81,896
2002	1,760,186	83,943
2003	1,492,816	85,638
2004	1,860,344	89,250
2005	1,108,382	89,912
2006	1,149,877	96,591
2007	2,099,953	91,566
2008	2,341,780	86,260
2009	2,206,377	85,764
2010	1,470,205	94,664
2011	984,968	94,981
2012	1,583,369	93,041
2013	2,447,479	83,619
2014	2,830,674	81,081
Average	**1,590,373**	**87,102**

[1] Depicts Water Year ending in year shown

Source: GEI 2019

As shown in Table 3, the Kern County Subbasin lost an annual average of approximately 1.6 million AFY via groundwater pumping and approximately 87,000 AFY in natural subsurface outflow between 1995 and 2014. Through this same period, the Subbasin recharged an average of approximately 1.4 million AFY via deep percolation, canal seepage, surface water inflow, and managed recharge. Accordingly, the Subbasin experienced an average net loss of approximately 277,000 AFY per year from 1995 to 2014 (GEI 2019). As with the Tule Subbasin, this trend indicates ongoing overdraft conditions in the Kern County Subbasin.

Groundwater Supply Management

The Kern County Subbasin is not adjudicated; therefore, there are no pumping restrictions in place for groundwater wells in the basin. However, there are groundwater management regulations and plans for the basin that are implemented towards the goals of achieving and maintaining sustainability of the groundwater supply and quality. An overview of these regulations and plans is discussed below.

Sustainable Groundwater Management Act

See full discussion of SGMA in Section 4.1.1, Tule Subbasin.

DWR identifies the Kern County Subbasin as a High priority basin. The Subbasin includes four GSAs submitting individual GSPs (GEI 2019).

Kern Groundwater Authority Groundwater Sustainability Plan

The portion of the Kern County Subbasin closest to the Project Area is located within the SGMA jurisdiction of the Kern Groundwater Authority (KGA), which encompasses approximately 900,000 acres of the Kern County Subbasin and includes fifteen member agencies. The KGA GSP, released in August 2019, serves as a comprehensive foundation for groundwater management within areas of the Subbasin covered by the KGA (GEI 2019).

The KGA GSP describes the Plan Area and characterizes groundwater conditions in the Kern County Subbasin, including changes in groundwater storage, water quality, and land subsidence. Using historical data, the GSP models the hydrology of the region and develops a water budget. In addition, the GSP identifies a sustainability goal and defines undesirable results (GEI 2019).

Information from the KGA GSP is incorporated into this WSA.

Kern County Integrated Regional Water Management Plan

The Project Area is not located in the Kern Region for the purposes of water management planning; however, the Project may receive water from the Kern County Subbasin, which is located in the jurisdiction of the Tulare Lake Basin Portion of Kern County IRWMP management area (Kern County Water Agency [KCWA] 2011).

The purpose of the Kern IRWMP is to develop a cooperative regional framework, implementation plan, and context for managing water resources in the Kern Region. The Kern County RWMG includes the majority of water agencies and stakeholders in the region. The Project Area is nearest to the North County Subregion of the Kern Region (KCWA 2011).

The Kern IRWMP identifies groundwater overdraft as a primary concern in the San Joaquin Valley Groundwater Basin. Two irrigation districts in the North County Subregion, North Kern Water Storage District and Shafter-Wasco Irrigation District, both practice groundwater management through importation of surface water and monitoring of groundwater levels and quality. Between 1991 and 2004, the two districts recharged a total of approximately 1.7 million acre-feet of water into the underlying Kern County Subbasin via direct recharge and in-lieu recharge (KCWA 2011).

Information from the Kern IRWMP is incorporated into this WSA.

4.2 Kern-Tulare Water District

The KTWD was formed in 1974 for the purposes of providing irrigation water to local agricultural producers (KTWD 2006). In January 2009, KTWD consolidated with Rag Gulch Water District. KTWD is comprised of 20,140 acres spanning Kern and Tulare Counties (KTWD 2019).

The following sections characterize the water supply sources comprising KTWD's water portfolio.

4.2.1 KTWD Water Supply Sources

The KTWD water portfolio is comprised of a combination of imported surface water, groundwater, and oilfield produced water.

Imported Surface Water

Extending 400 miles through central California, the Central Valley Project (CVP) is a network of surface water dams, reservoirs, canals, hydroelectric powerplants and other facilities. The CVP is owned and operated by the United States Bureau of Reclamation (USBR). The CVP reaches from the Cascade Mountains near Redding in the north to the Tehachapi Mountains near Bakersfield in the south, and has long-term agreements to supply water to more than 250 contractors in 29 of California's 58 counties (USBR 2017, 2019a).

The Delta Division provides for the transport of CVP water through the central portion of the Central Valley. The Delta Division contains facilities for transporting water from the Sacramento River to the San Joaquin Valley and to agricultural land in the Delta Division (USBR 2019b). CVP water flows through the California Aqueduct to Tupman under a contract with DWR (USBR 2013).

KTWD's federal CVP contracts are listed below:

- *I1r-1460-A*, CVP Friant-Kern Canal Unit Class 2 (Maximum Annual Quantity: 5,000 acre-feet)
- *14-06-200-8601A-IR16*, CVP Cross Valley Canal Unit (Maximum Annual Quantity: 40,000 acre-feet)
- *14-06-200-8367A-IR16*, CVP Cross Valley Canal Unit (Maximum Annual Quantity: 13,300 acre-feet)

Due to the location of the KTWD service area and facilities, it does not have direct connection to physically receive its CVP water supplies from the Delta Division. Therefore, KTWD receives its CVP allocation via water exchanges with Arvin Edison Water Storage District or via reverse flow in the Friant Kern Canal (USBR 2013).

KTWD also enters into annual contracts for Section 215 water from USBR (temporary surplus water supplies from the Delta), purchases Class 1 and Class 2 water supplies from other Friant contractors, purchases CVP water from other South of Delta contractors, and purchases Kern River water from the City of Bakersfield (KTWD 2019).

Groundwater

KTWD developed several long-term groundwater banking programs with North Kern Water Storage District, Rosedale-Rio Bravo Water Storage District, and West Kern Water Storage to deliver excess water when surface supplies are available and to extract groundwater during years of inadequate supplies (KTWD 2019).

The North Kern project yields an annual dry year supply of up to 5,000 acre-feet. The agreement requires KTWD to bank water before it can be extracted and leave ten percent of the water banked in North Kern to account for losses (KTWD 2019).

The Rosedale-Rio Bravo project yields an estimated dry year annual supply of up to 9,000 acre-feet. The agreement requires KTWD to bank 2.13 acre-feet for each acre-foot extracted and to bank water before it can be extracted (KTWD 2019).

The West Kern project yields an estimated dry year annual supply of up to 2,000 acre-feet. The agreement requires KTWD to bank 2 acre-feet for each acre-foot extracted and bank water before it can be extracted (KTWD 2019).

Oilfield Produced Water

In 2016, KTWD executed a 20-year contract with Hathaway, LLC to receive oilfield-produced water. The source of oilfield-produced water is from exempted aquifers beneath and hydrologically separated from the freshwater bearing zones of the Kern County Subbasin. KTWD currently receives about 2,400 AFY of water from this source. Oilfield-produced water is blended with other water sources before being distributed (KTWD 2019).

5 Water Supply Reliability

SB 610 requires the consideration of supply availability under varying climatic conditions, including normal year, single-dry year, and multiple-dry year scenarios.

5.1 San Joaquin Valley Groundwater Basin

The Project applicant may pump groundwater from the Tule or Kern County Subbasins in the San Joaquin Valley Groundwater Basin. Because these subbasins are not adjudicated, pumping is not currently restricted. Section 4.1 describes that there are multiple active groundwater management efforts in place in the Tule and Kern County Subbasins. Following are discussions of water supply reliability for the Tule and Kern County Subbasins, based on available published data.

5.1.1 Tule Subbasin

Implementation of the Eastern Tule GSP may include restrictions on groundwater pumping activities; however, such restrictions are not currently in place. Historical groundwater level trends in the Subbasin indicate that although overdraft conditions are present, there is water supply in the Subbasin.

Sufficient data is not available to construct a comprehensive hydrologic model of the Tule Subbasin; however, it is reasonable to anticipate that water supply reliability in the Tule Subbasin is improving with implementation of groundwater management efforts including compliance with SGMA. The Eastern Tule GSA, in coordination with the other GSAs in the Tule Subbasin, has established a Subbasin Sustainability Goal to achieve no long-term change in groundwater storage by year 2040. The GSP identifies a series of projects and management actions that will allow for the Eastern Tule GSA (in coordination with the other Tule Subbasin GSAs) to achieve the Tule Subbasin Sustainability Goal (Eastern Tule GSA 2019).

Table 4 summarizes the Tule Subbasin's projected 2040-2050 sustainable yield, as established in the Eastern Tule GSP. The "sustainable yield" of a groundwater basin is the average rate of groundwater use that can be maintained without endangering the long-term quality or quantity of water in the basin.

Table 4 Projected Tule Subbasin Sustainable Yield, 2040-2050 (acre-feet)

Water Year[1]	Areal Recharge from Precipitation	Streambed Infiltration			Return Flow		Subsurface Inflow	Mountain Block Recharge	Subsurface Outflow	Sustainable Yield
		Tule River	Deer Creek	White River	Irrigated Agriculture	Municipal				
2041	21,000	21,800	12,200	6,200	64,100	9,400	51,000	32,000	90,000	127,700
2042	21,000	21,800	12,200	6,200	64,100	9,400	52,000	32,000	90,000	128,700
2043	21,000	21,800	12,200	6,200	64,100	9,400	52,000	32,000	90,000	128,700
2044	21,000	21,800	12,200	6,200	64,100	9,400	52,000	32,000	90,000	128,700
2045	21,000	21,800	12,200	6,200	64,100	9,400	52,000	32,000	90,000	128,700
2046	21,000	21,800	12,200	6,200	64,100	9,400	53,000	32,000	89,000	130,700
2047	21,000	21,800	12,200	6,200	64,100	9,400	53,000	32,000	89,000	130,700
2048	21,000	21,800	12,200	6,200	64,100	9,400	53,000	32,000	89,000	130,700
2049	21,000	21,800	12,200	6,200	64,100	9,400	53,000	32,000	89,000	130,700
2050	21,000	21,800	12,200	6,200	64,100	9,400	53,000	32,000	88,000	131,700
2040-2050 Average	**21,000**	**21,800**	**12,200**	**6,200**	**64,100**	**9,400**	**52,000**	**32,000**	**89,000**	**129,700**

[1] Depicts Water Year ending in year shown

Source: Eastern Tule GSA 2019

Table 4 indicates an increasing sustainable yield for the Tule Subbasin between the years 2040 and 2050. This projection suggests that, with implementation of management actions and programs identified in the Eastern Tule GSP, overdraft conditions in the Tule Subbasin will recover, thereby improving water supply reliability.

5.1.2 Kern County Subbasin

As with the Tule Subbasin, sufficient data is not available to construct a comprehensive hydrologic model of the Kern County Subbasin; however, it is reasonable to anticipate that water supply reliability in the Kern County Subbasin is improving with implementation of groundwater management efforts including compliance with SGMA. The KGA GSP provides information on current groundwater conditions, establishes the sustainability goals to be achieved through the implementation of management actions and projects, and demonstrates how sustainability will be achieved through the 20-year implementation period. Using historical groundwater elevations, pumping records, and simulation modeling, the KGA GSP establishes a Sustainable Yield of approximately one million AFY (GEI 2019).

The KGA, in coordination with the other GSAs in the Subbasin, established in its GSP a sustainability goal for the Subbasin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline of 2020. The Kern County Subbasin Sustainability Goal (GEI 2019) is to:

- Achieve sustainable groundwater management in the Kern County Subbasin through the implementation of projects and management actions at the member agency level of each GSA
- Maintain its groundwater use within the sustainable yield of the basin as demonstrated by monitoring and reporting groundwater conditions
- Operate within the established sustainable management criteria, which are based on the collective technical information presented in the GSPs in the Subbasin
- Collectively bring the Subbasin into sustainability and to maintain sustainability over the implementation and planning horizon

The KGA GSP identifies a list of over 150 projects and management actions designed to maintain or achieve sustainability within the Subbasin. Projects include: expansion of local and regional conveyance and recharge facilities to take advantage of surplus supplies; new conveyance and recharge projects; and participation in the California Water Fix or other thru-Delta improvement projects. Management actions include: implementation of district level fee structures to incentivize reduced groundwater pumping; participation in local, regional, and state-wide water markets; and setting allocations for groundwater use by landowners based on the sustainable yield of the management area (GEI 2019).

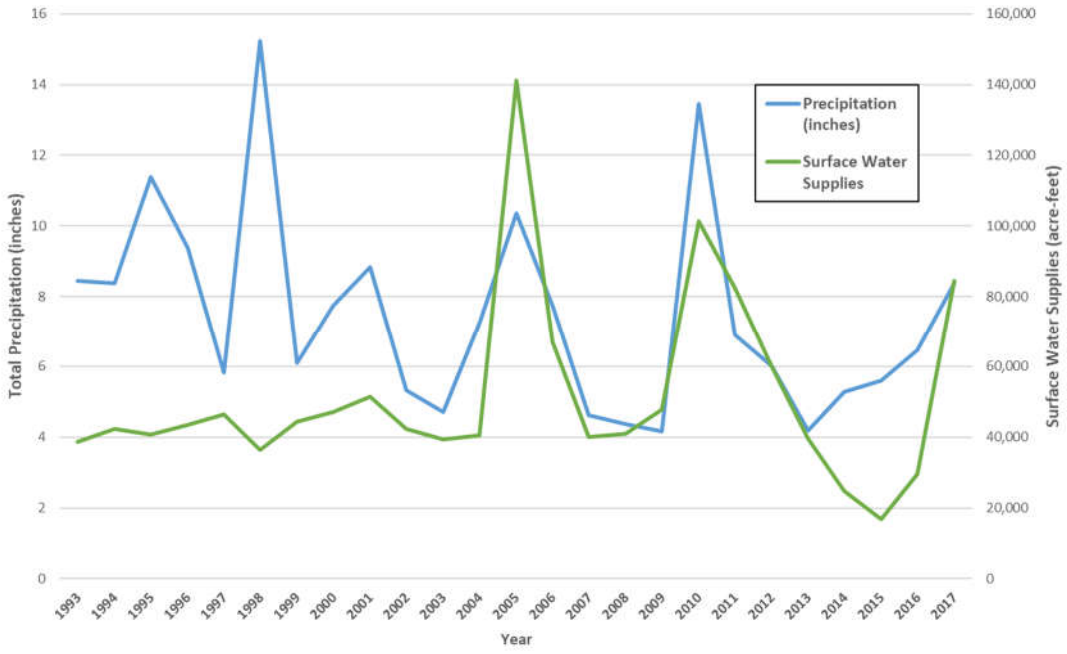
Should the Proposed Project use water pumped from the Kern County Subbasin to support the Proposed Project, such use would be consistent with management direction provided in the KGA GSP.

5.2 Kern-Tulare Water District

KTWD surface water supplies are particularly vulnerable to changes in climatic condition. Use and availability of CVP water varies significantly and is dependent on climatic conditions in the Delta. Starting in 2012, Kern River water is currently only available in wet years.

Figure 4**Error! Reference source not found.** summarizes the KTWD historical surface water supply deliveries in the context of annual precipitation patterns from 1993 to 2017.

Figure 4 KTWD Historical Precipitation and Surface Water Supply Deliveries, 1993-2017



Data source: KTWD 2019

As shown in Figure 4**Error! Reference source not found.**, the availability of surface water supplies generally decreases in dry years.

In 2001, KTWD began operating groundwater banking programs to improve water supply reliability. In wet or average water years, after KTWD has met its demands, excess water is delivered to its various programs for groundwater banking. During years in which surface water supplies are low, KTWD relies on its banking programs to help supplement deliveries (KTWD 2019). These banking programs help to ensure the reliability of water supplies within the KTWD service area.

In its GSP, KTWD identifies the following program actions to accomplish groundwater sustainability within its management area (KTWD 2019):

1. Modify KTWD pricing structure (estimated yield of 5,580 AFY reduction in groundwater pumping)
2. Construct pipeline to deliver oilfield-produced water from California Resources Corporation (estimated 3,000 AFY of additional surface supplies, resulting in 1,440 AFY reduction in groundwater pumping)
3. Construct KTWD off-stream surface storage (estimated yield between 530 and 2,000 AFY)

In addition, the KTWD GSP analyzed four modeled water supply availability scenarios to evaluate the amount of applied water demand, surface water available, and impact upon groundwater storage with KTWD future actions. In each modeled scenario, the KTWD water supplies were sufficient to meet its projected demands (KTWD 2019). Should the Proposed Project use water purchased from

the KTWD, such use would be consistent with the KTWD management direction including as assessed in the KTWD GSP.

6 Impact Conclusions

This WSA assesses the Proposed Project's construction and operation water demands. During the construction period of up to 24 months, the Proposed Project would use up to approximately 400 acre-feet of water for construction activities. Operational water demands, which include water used for fire suppression, solar PV panel washing, and operation of the proposed O&M building, would total approximately 50 AFY. The Proposed Project's amortized annual water demand is estimated to be approximately 61.4 AFY.

The Project Area is located in an area that has historically supported agricultural production, and although the site is not currently irrigated, it has been in the past. Previous irrigation water was provided via groundwater pumped on site (from the Tule Subbasin). Implementation of the Proposed Project would replace past, present, or future agricultural water uses on the Project Area, and may therefore introduce a decreased operational water demand on the Project Area. Historical site records are not available to assess site-specific agricultural uses.

Sufficient data is not available to construct a comprehensive hydrologic model for groundwater supply in the Project Area. As described herein, the San Joaquin Valley Groundwater Basin is not currently adjudicated, and groundwater supplies are managed through implementation of GSPs under SGMA, as well as IRWMPs. Based on information provided in the applicable GSPs, sufficient groundwater supply is available to meet the construction and operational requirements of the Proposed Project.

If imported surface water supply is used to support the Project needs, such use would occur in compliance with management of the KTWD, which has sufficient water supply available to support existing and anticipated demands within its jurisdiction. The Proposed Project is not specifically identified as a future demand within the KTWD jurisdiction; however, the Proposed Project would replace historical and future agricultural uses on the Project Area that may otherwise have relied on the KTWD for water supply. Although regional water shortages may occur in the area during the Project's lifetime, such conditions may occur regardless of the proposed solar development.

In conclusion, sufficient water supply is available to meet the water demands of the Proposed Project.

7 References

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Appendix A

DWR Guidebook for Implementation of Senate Bill 610

The Water Supply Assessment (WSA) for the proposed Rexford Solar Project ("Proposed Project") was prepared using guidance contained in the California Department of Water Resources (DWR) *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001* (DWR Guidebook). DWR prepared the Guidebook to assist water suppliers in preparation of the water assessments and the written verification of water supply availability required by Senate Bill (SB) 610 and SB 221; DWR has no regulatory or permitting approval authority concerning water assessments or verifications of sufficient water supply, and provides the Guidebook purely as an assistance tool (DWR 2003). The following table provides a detailed description of how the DWR Guidebook was used in preparing the proposed Project's WSA.

Table A-1 Rexford Solar Energy Project WSA - Consistency with DWR Guidelines

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
Section 1 (page 2). Does SB 610 or SB 221 apply to the proposed development?	Is the Project subject to SB 610? Is the Project subject to CEQA (Water Code §10910(a))? If yes, continue.	WSA Section 3.1 Yes, the Project is subject to CEQA.
	Is it a "project" as defined by Water Code §10912(a) or (b)? If yes, to comply with SB 610 go to Section 2, page 4.	WSA Section 3.2 Yes, the Proposed Project is considered to meet the definition of "project" per Water Code §10912(a) or (b).
	Is the project subject to SB 221? Does the tentative map include a "subdivision" as defined by Government Code §66473.7(a)(1)? If no, stop.	No, the Proposed Project does not include a "subdivision;" SB 221 does not apply to the Proposed Project, and no further action relevant to SB 221 is required.
Section 2 (page 4). Who will prepare the SB 610 analysis?	Is there a public water system ("water supplier") for the project (Water Code § 10910(b))? If no, go to Section 3, page 6.	WSA Section 3.3 No, there is no public water system for the Proposed Project.
Section 3 (page 6). Has an assessment already been prepared that includes this project?	Has this project already been the subject of an assessment (Water Code §10910(h))? If no, go to Section 4, page 8.	No, the Proposed Project has not been the subject of an assessment.
Section 4 (page 8). Is there a current Urban Water Management Plan?	Is there an adopted urban water management plan (Water Code §10910(c))? If yes, continue. If yes, information from the UWMP related to the proposed water demand for the project may also be used for carrying out Section 5, Steps 1 and 2, and Section 7; proceed to Section 5, page 10 of the Guidelines.	WSA Section 3.4 The Project Area is not located within the management planning area of an existing UWMP.
	Is the projected water demand for the project accounted for in the most recent UWMP (Water Code §10910(c)(2))? If no, go to Section 5, page 10.	WSA Section 3.4 N/A

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
Section 5 (page 10). What information should be included in an assessment?	Step One (page 13). Documenting wholesale water supplies.	The Project would not receive wholesale water supplies.
	Step Two (page 17). Documenting Supply if Groundwater is a Source*.	WSA Section 4.1 The Proposed Project's water demands may be met with groundwater supplies from the San Joaquin Valley Groundwater Basin.
	Specify if a groundwater management plan or any other specific authorization for groundwater management for the basin has been adopted and how it affects the water supplier's use of the basin.	WSA Section 4.1 Under SGMA, the Tule and Kern County Subbasins are required to prepare GSPs by January 2020. At the time of preparation of this WSA, draft GSPs had been made public. This WSA relies on data and assumptions made in the GSPs related to historical production and future sustainable yield.
	The description of the groundwater basin may be excerpted from the groundwater management plan, from DWR Bulletin 118, California's Ground Water, or from some other document that has been published and that discusses the basin boundaries, type of rock that constitutes the aquifer, variability of the aquifer material, and total groundwater in storage (average specific yield times the volume of the aquifer).	WSA Section 4.1 provides descriptions of the groundwater basin characteristics using all available resources, including DWR Bulletin 118.
	In an adjudicated basin the amount of water the urban supplier has the legal right to pump should be enumerated in the court decision.	The Project is not located in an adjudicated groundwater basin.
	The Department of Water Resources has projected estimates of overdraft, or "water shortage," based on projected amounts of water supply and demand (basin management), at the hydrologic region level in Bulletin 160, California Water Plan Update. Estimates at the basin or subbasin level will be projected for some basins in Bulletin 118. If the basin has not been evaluated by DWR, data that indicate groundwater level trends over a period of time should be collected and evaluated.	WSA Section 4.1 discusses groundwater level trends using data from Bulletin 118 and the local GSPs.
	If the evaluation indicates an overdraft due to existing groundwater extraction, or projected increases in groundwater extraction, describe actions and/or program designed to eliminate the long term overdraft condition.	WSA Section 4.1 and 5 discuss groundwater management actions and programs intended to bring achieve the sustainability goals in the subbasins.

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
	If water supplier wells are plotted on a map, or are available from a geographic information system, the amount of water extracted by the water supplier for the past five years can be obtained from the Department of Health Services, Office of Drinking Water and Environmental Management.	WSA Section 4.1 summarizes historical groundwater production from wells in the San Joaquin Valley Groundwater Basin.
	Description and analysis of the amount and location of groundwater pumped by the water supplier for the past five years. Include information on proposed pumping locations and quantities. The description and analysis is to be based on information that is reasonably available, including, but not limited to, historic use records from DWR.	WSA Section 4.1 summarizes historical groundwater production from wells in the San Joaquin Valley Groundwater Basin.
	Analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the water supplier.	WSA Section 4.1 characterizes the Tule and Kern County Subbasins of the San Joaquin Valley Groundwater Basin.
	Step 3 (page 21). Documenting project demand (Project Demand Analysis).	WSA Section 2.3 Construction of the Proposed Project would require up to approximately 400 acre-feet of water. Operational water demands, which include water used for fire suppression, solar PV panel washing and concentrate, and operation of the proposed O&M building, would total approximately 50 AFY.
	Step 4 (page 26). Documenting dry year(s) supply.	WSA Section 5 discusses water supply reliability, including during dry year scenarios.
	Step 5 (page 31). Documenting dry year(s) demand.	WSA Section 2.3 documents the Project's anticipated water demands.
Section 6 (page 33). Is the projected water supply sufficient or insufficient for the proposed project?		WSA Section 6 summarizes why the identified water supply/supplies are considered sufficient for the Proposed Project.
Section 7 (page 35). If the projected supply is determined to be insufficient.	Does the assessment conclude that supply is "sufficient"? If no, continue.	WSA Section 5 It is reasonably anticipated that sufficient water supplies are available for the Proposed Project.
Section 8 (page 38). Final SB 610 assessment actions by lead agencies.	The lead agency shall review the WSA and must decide whether additional water supply information is needed for its consideration of the proposed project. The lead agency "shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy	The WSA for the Proposed Project will be included as part of the Draft EIR for the Proposed Project. Per SB 610, the lead agency will approve or disapprove a project based on a number of factors, including but not limited to the water supply assessment.

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
	the demands of the project, in addition to existing and planned future uses."	

APPENDIX L
CEQA NOTICES

APPENDIX L.1
NOP TRACKING SHEET

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
AVAILABILITY OF PUBLIC VIEWING											
Tulare County Resource Management Agency 5961 S. Mooney Blvd. Visalia, CA 93277-9394			X			X					
Tulare County Website: https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmentalimpact-reports/rexford-solar-project-psp-19-073/											
STATE CLEARINGHOUSE (Agencies below were marked with "X" on the NOC)				2/14/20	2/14/20						2/14/20 NOP published on OPR/SCH CEQAnet.
• Air Resources Board											
• California Energy Commission											
• California Highway Patrol											
• Caltrans District #6											See note below.
• Department of Conservation											
• Department of Fish and Wildlife Region #4											See note below.
• Department of Food and Agriculture											
• Department of Forestry and Fire Protection											
• Department of General Services											
• Native American Heritage Commission											See note below.
• Office of Historic Preservation											
• Public Utilities Commission											
• Regional Water Quality Control Board District #5F											See note below.
• Resources Agency											
• State Water Resources Control Board – Water Quality											
• Department of Toxic Substances Control											3/2/20, letter from Gavin McCreary, Project Manager, with recommendations for evaluation of specific hazard-related issues.
MILITARY											
Mr. David S. Hulse Naval Facilities Engineering Command Community Plans Liaison Officer (CPLO) 1220 Pacific Highway AM-3 San Diego, CA 92132			X						2/14/20 7013171000 0019566627	2/18/20	5/1/20 no comments received to date.

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
FEDERAL AGENCIES											
U.S. Army Corps of Engineers Sacramento District 1325 J Street, Room 1350 Sacramento, CA 95814-2922			X						2/14/20 7013171000 0019566658	2/18/20	5/1/20 no comments received to date.
U.S. Fish and Wildlife Service Sacramento Fish & Wildlife Office 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846			X						2/14/20 7013171000 0019566665	2/18/20	5/1/20 no comments received to date.
U.S. Forest Service Region 5 – Pacific Southwest Office 1323 Club Drive Vallejo, CA 94592			X						2/14/20 7013171000 0019566634	2/18/20	5/1/20 no comments received to date.
Natural Resources Conservation Service Visalia Service Center Attn: Lurana Strong, District Conservationist 3530 W. Orchard Ct. Visalia, CA 93277-7055 lurana.strong@usda.gov			X		X		2/14/20		2/14/20 7013171000 0019566641	2/18/20	5/1/20 no comments received to date.
STATE & REGIONAL AGENCIES											
California Highway Patrol – Visalia Area Attn: David Gilmore, Captain dagilmore@chp.ca.gov					X		2/14/20				5/1/20 no comments received to date.
California Department of Fish and Wildlife Region 4 – CEQA Submittal R4CEQA@wildlife.ca.gov					X		2/14/20				4/6/20, letter from Julie Vance with recommendations for Swainson's hawk, San Joaquin kit fox, Crotch bumble bee, San Joaquin adobe sunburst and California jewelflower.
Caltrans – District 6 Attn: Michael Navarro 1352 W. Olive Ave. Fresno, CA 93778 michael.navarro@dot.ca.gov					X		2/14/20				5/1/20 no comments received to date.

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
Caltrans – District 6 Attn: David Deel 1352 W. Olive Ave. Fresno, CA 93778 david.deel@dot.ca.gov					X		2/14/20				2/18/20, email notification of receipt 3/13/20, letter received stating initial project review comments are still valid.
Native American Heritage Commission NAHC@nahc.ca.gov					X		2/14/20				2/18/20, NAHC responded with information regarding AB 52 and SB 18 and recommendations for Cultural Resources Assessments.
Central Valley Regional Water Quality Control Board CentralValleyFresno@waterboards.ca.gov					X		2/14/20				2/14/20, email notification of receipt 5/1/20 no comments received to date.
San Joaquin Valley Air Pollution Control District Permit Services – CEQA Division 1990 E. Gettysburg Ave. Fresno, CA 93726			X						2/14/20 7013171000 0019566672	2/18/20	5/1/20 no comments received to date.
Southern California Edison Attn: Calvin Rossi, Region Manager Local Public Affairs 2425 S. Blackstone St. Tulare, CA 93274 calvin.rossi@sce.com			X		X		2/14/20		2/14/20 7013171000 0019566733	As of 2/25/20 website says in transit 2/20/20	5/1/20 no comments received to date.
Southern California Gas Company 404 N. Tipton Street Visalia, CA 93292 Attn: James Chuang, Sr. Environmental Specialist envreview@semprautilities.com			X		X		2/14/20		2/14/20 7013171000 0019566726	2/19/20	5/1/20 no comments received to date.

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
LOCAL AGENCIES											
Tulare County Agricultural Commissioner 4437 S. Laspina Street Tulare CA 93274			X						2/14/20 7013171000 0019566689	2/18/20	2/20/20, NOP was returned to RMA 3/5/20, NOP was resubmitted via email to Ag Commissioner Tom Tucker 5/1/20 no comments received to date.
Tulare County Association of Governments Attn: Ted Smalley, Executive Director 210 N. Church Street, Suite B Visalia, CA 93291			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County Farm Bureau Tricia Stever Blattler, Executive Director P.O. Box 748 Visalia, CA 93291			X						2/14/20 7013171000 0019566696	2/18/20	5/1/20 no comments received to date.
Tulare County Fire Warden 835 S. Akers Street Visalia, CA 93277			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County HHSA Environmental Health Department Attn: Allison Shuklian 5957 S. Mooney Blvd Visalia, CA 93277			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County Local Agency Formation Commission 210 N. Church Street, Suite B Visalia, CA 93291			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County Office of Emergency Services Attn: Sabrina Bustamonte / David Le 5957 S. Mooney Blvd Visalia, CA 93277			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County Resource Management Agency Fire Division (Gilbert Portillo / John Meyer)			X			2/14/20 Interoffice					5/1/20 no comments received to date.

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
Tulare County Resource Management Agency Flood Control Division (Reed Schenke / Ross Miller)			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County Resource Management Agency Public Works Division (Hernan Beltran / Johnny Wong)			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County Resources Conservation District 3530 W. Orchard Ct Visalia, CA 93277			X						2/14/20 7013171000 0019566702	2/18/20	5/1/20 no comments received to date.
Tulare County Sheriff Headquarters 2404 W. Burrel Avenue Visalia, CA 93291			X			2/14/20 Interoffice					5/1/20 no comments received to date.
Tulare County UC Cooperative Extension 4437 S. Laspina Street Tulare, CA 93274			X						2/14/20 7013171000 0019566719	2/18/20	5/1/20 no comments received to date.
TRIBES											
Kern Valley Indian Community Robert Robinson, Co-Chairperson P.O. Box 1010 Lake Isabella, CA 93240 bbutterbredt@gmail.com					X		2/14/20				See AB 52 tracking table.
Kern Valley Indian Community Julie Turner, Secretary P. Box 1010 Lake Isabella, CA 93240 meindiangirl@sbcglobal.net					X		2/14/20				See AB 52 tracking table.
Santa Rosa Rancheria Tachi Yokut Tribe Leo Sisco, Chairperson P. O. Box 8 Lemoore, CA 93245 LSisco@tachi-yokut-nsn.gov					X		2/14/20				See AB 52 tracking table.
Santa Rosa Rancheria Tachi Yokut Tribe Robert Jeff, Vice-Chair P. O. Box 8 Lemoore, CA 93245 RGJeff@tachi-yokut-nsn.gov					X		2/14/20				See AB 52 tracking table.

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
Santa Rosa Rancheria Cultural Department Shana Powers, Director P. O. Box 8 Lemoore, CA 93245 SPowers@tachi-yokut-nsn.gov					X		2/14/20				See AB 52 tracking table.
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P.O. Box 226 Lake Isabella, CA 93240 rgomez@tubatulabal.org					X		2/14/20				See AB 52 tracking table.
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258 neil.peyron@tulerivertribe-nsn.gov					X		2/14/20				See AB 52 tracking table.
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258 tuleriverenv@yahoo.com					X		2/14/20				See AB 52 tracking table.
Wuksache Indian Tribe/ Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906 Kwood8934@aol.com					X		2/14/20				See AB 52 tracking table.
OTHER INTERESTED PARTIES											
20SD 8ME LLC 5455 Wilshire Blvd Ste 2010 Los Angeles, CA 90036 vshenoy@8minute.com					X		2/14/20				
Sheila Sannadan Adams Broadwell Joseph & Cardozo 601 Gateway Blvd, Ste 1000 South San Francisco, CA 94080-7037 ssannadan@adamsbroadwell.com					X		2/14/20				

NOTICE OF PREPARATION – REXFORD SOLAR FARM (PSP 19-073) – SCH# 2020020326

AGENCY / ENTITY	DOCUMENTS SENT					DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			Electronic Submittal							
	Cover Letter	NOC	NOP	NOC	NOP	Hand Delivered / Interoffice	E-mail	FedEx	Certified US Mail	Return Receipt	
Michael Lozeau Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 michael@lozeaudrury.com					X		2/14/20				
Hannah Hughes Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 hannah@lozeaudrury.com					X		2/14/20				
Komalpreet Toor Lozeau Drury LLP 1939 Harrison St, Ste 150 Oakland, CA 94612 komal@lozeaudrury.com					X		2/14/20				

APPENDIX L.2
NOTICE OF PREPARATION

NOTICE OF PREPARATION

To:	State Clearinghouse PO Box 3044/1400 Tenth St Sacramento, CA 95814	From:	County of Tulare – RMA 5961 S Mooney Blvd Visalia, CA 93277

Date: February 14, 2020

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) and Scoping Meeting

Project Title: Rexford Solar Farm

Project Applicant: 20SD 8ME LLC

Project Location: The Project is located on approximately 3,782 acres of land near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County. The Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and lies east of State Route 65. The Project is located in the Ducor and Richgrove U.S. Geological Survey 7.5-minute topographic quadrangles. The Public Lands Survey System maps the area as Township 23 south, Range 27 east, Sections 20-23, and 25-36; Township 23 south, Range 28 east, Sections 30, 31; and Township 24 south, Range 27 east, Sections 01- 04, 08-11, 15-22, and 27-29.

Tulare County Resource Management Agency (RMA) will be the Lead Agency and will prepare an environmental impact report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit(s) or other approval(s) for the project. In addition, please provide us with contact information of the person(s) in your agency that we may contact during the California Environmental Quality Act (CEQA) process.

The project description, location, and the potential environmental effects are contained in the attached materials. The NOP is also available on the County website beginning on February 14, 2020 at: https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/environmental-impact-reports/rexford-solar-project-psp-19-073/.

Due to the limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A scoping meeting is scheduled for **Thursday, March 5, 2020 at 1:30 P.M.** in the Main Conference Room of the Tulare County Resource Management Agency at the address shown above.

Please direct your response to Hector Guerra, Chief Environmental Planner at the address shown above. He may be contacted by e-mail at hguerra@co.tulare.ca.us or by telephone at 559-624-7121.

Signature: _____ Date: 2/13/20
Hector Guerra
Title: Chief Environmental Planner

Signature: _____ Date: 2/13/2020
Reed Schenke, P.E.
Title: RMA Director / Environmental Assessment Officer

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375

PROJECT LOCATION AND SETTING

The proposed Rexford Solar Farm (Project) would be located on approximately 3,782 acres of land near the unincorporated community of Ducor, a census-designated place, in south-central Tulare County (Figure 1). Neighboring unincorporated communities include Terra Bella to the north and Richgrove to the southwest. As shown on Figure 2, the Project site is generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The majority of the Project site is bisected by and east of State Route (SR) 65.

The Project is located in the Ducor and Richgrove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles. The Public Lands Survey System maps the area as Township 23 south, Range 27 east, Sections 20-23, and 25-36; Township 23 south, Range 28 east, Sections 30, 31; and Township 24 south, Range 27 east, Sections 01- 04, 08-11, 15-22, and 27-29.

Elevations within the Project site range from 475-670 feet (145-205 meters) above mean sea level. The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered rural residences and agricultural-related structures. The portion of the Project site located south of the White River is surrounded by the Tulare Solar Center facility.

The majority of the Project site is zoned as AE-40 (Exclusive Agriculture – 40 acre minimum), with exception of the northernmost parcels (APN Nos. 321-040-007, -008, -011, and -025) which are zoned AE-10 (Exclusive Agriculture – 10 acre minimum). The Project site is designated as Extensive Agriculture, Valley Agricultural, and Valley Agriculture Extension by the Tulare County General Plan. These General Plan and zoning designations expressly allow the installation of renewable solar power with a Special Use Permit.

PROJECT DESCRIPTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the construction and operation of an up to 700 megawatt alternative current (MW AC) solar photovoltaic (PV) facility and an up to 700 MW AC energy storage system (ESS) on approximately 3,782 gross acres of land (on 40 discontiguous parcels) in unincorporated south-central Tulare County, California. The proposed Project would include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, ESS, access roads and fencing, and on-site substation. An operations and maintenance building may be constructed on the site.

The proposed Project would involve the construction of both transmission and collector lines. Power generated by the proposed Project would be transmitted to the Southern California Edison (SCE) Vestal Substation via an up to 230 kilovolt (kV) overhead and/or underground gen-tie line. The proposed transmission and/or collector lines would extend along existing roadway rights-of-way from various portions of the Project site (where substations are located) ultimately connecting to the Southern California Edison Vestal Substation. The transmission and/or collector lines would be located along portions of Road 232, Avenue 56, Avenue 64, Road 224, Road 240, Avenue 32, Richgrove Drive, and SR 65, or could possibly utilize additional nearby routings. The total length of the transmission and/or collector lines would be approximately 13 miles in length.

If you require additional information related to this notice, please contact:

Hector Guerra, Chief Environmental Planner at:
E-mail: hguerra@co.tulare.ca.us; or
Phone: (559) 624-7121

REVIEWING AGENCIES AND POTENTIAL APPROVALS REQUIRED:

The following agencies may have jurisdiction/interests concerning the proposed Project:

Regional, State and Federal:

- U.S. Fish and Wildlife Service
- California Department of Conservation – Division of Land Resource Protection
- California Department of Fish and Wildlife – Region #4
- Central Valley Regional Water Quality Control Board – Region #5
- California Department of Transportation (Caltrans)
- San Joaquin Valley Air Pollution Control District
- California Energy Commission
- California Public Utilities Commission

Local:

- Tulare County Resource Management Agency
- Tulare County Environmental Health and Human Services Agency
- Tulare County Flood Control
- Tulare County Fire
- Planning Branch (Environmental Planning, Project Review, Building and Housing Divisions)
- Public Works Branch

Figure 1. Regional Location Map

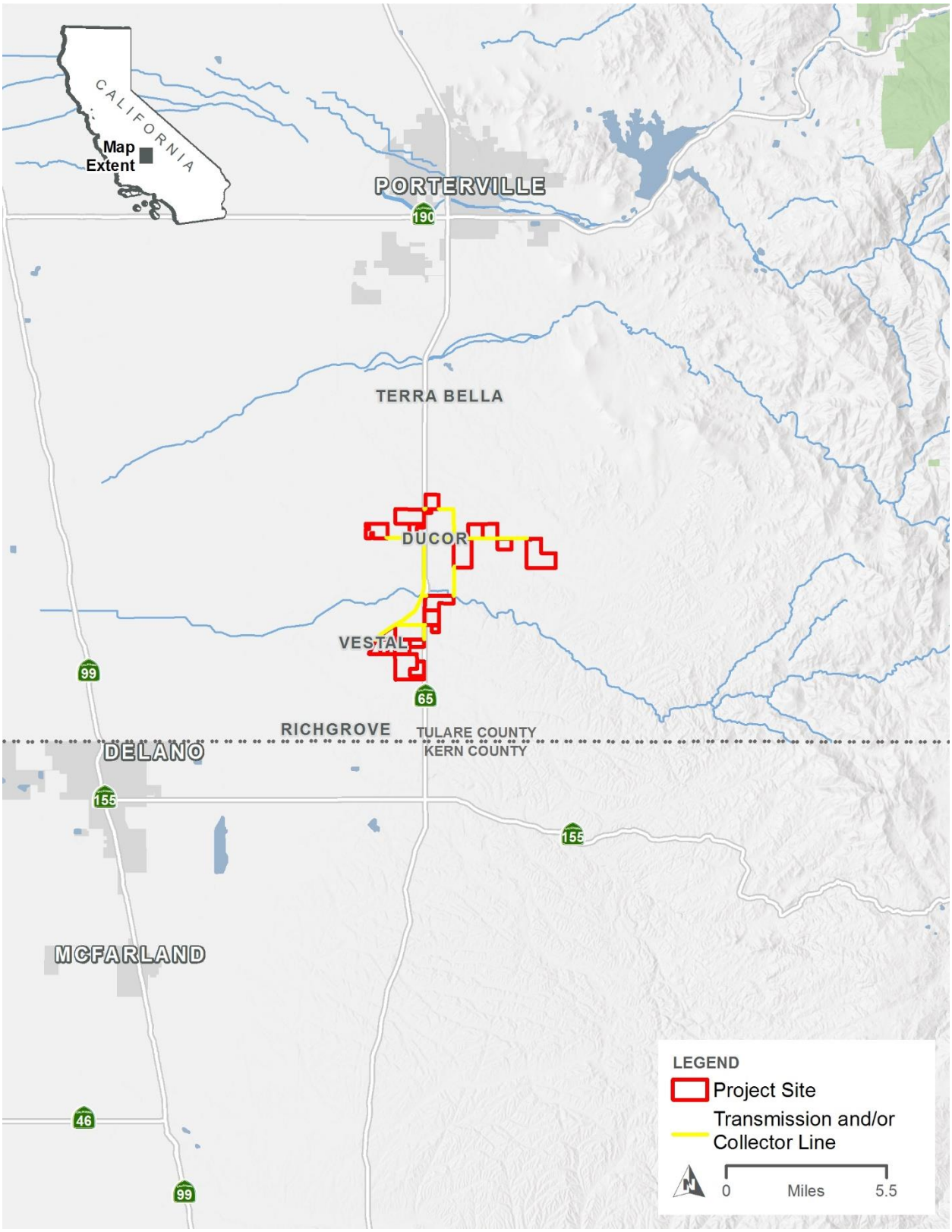
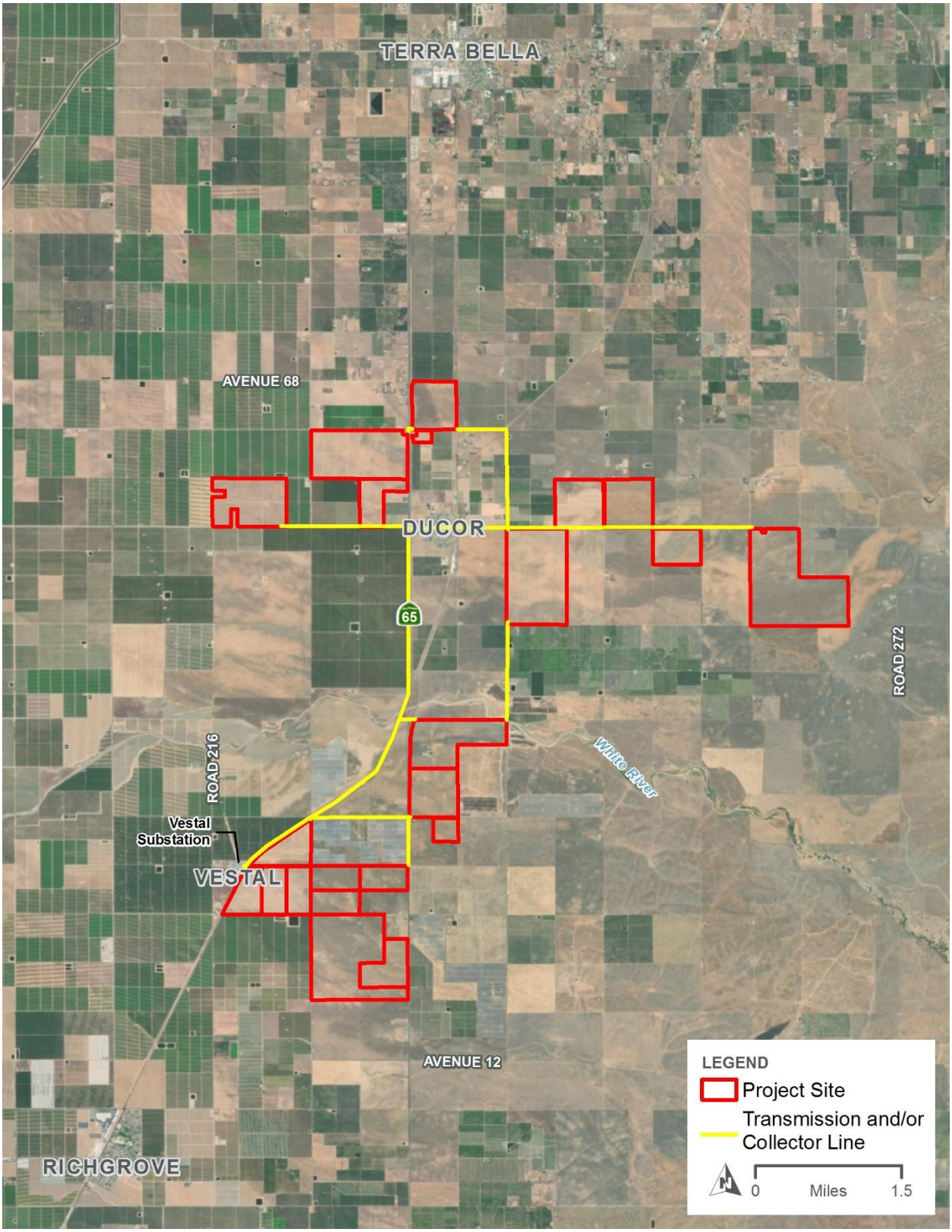


Figure 2. Vicinity Map



SUMMARY OF POTENTIAL ENVIRONEMNTAL EFFECTS

The EIR will evaluate, among other things, the probable direct and cumulative environmental impacts associated with the construction and operation of the solar energy facility and associated infrastructure. Mitigation measures will be recommended, where feasible, to mitigate potentially significant impacts. The proposed Project will be evaluated on its own merits, resource specific facts, and determinations; therefore, a project specific environmental document will be prepared. The following issues are proposed for analysis in the EIR:

Aesthetics

The Project is located in a generally rural area surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands and scattered residential buildings. The placement of PV solar panels and associated structures on the Project site would alter the existing character of the Project site and vicinity. The majority of the Project site is bisected by State Route 65. Residents and travelers on adjacent roads would observe alterations to the existing landscape. The EIR will provide an assessment of Project impacts to visual resources, as well as lighting and glare impacts.

Agriculture and Forestry Resources

The entire Project site is designated as Farmland of Local Importance by the California Farmland Mapping and Monitoring Program. The Project site is surrounded by existing agricultural uses including dry-land grain, irrigated crops, and grazing lands. The majority of the Project site is under Williamson Act contracts. The EIR will provide an assessment of potential Project related impacts to agricultural resources.

Air Quality / Greenhouse Gas Emissions

The EIR will describe regional and local air quality in the vicinity of the proposed Project site and evaluate impacts to air quality associated with the construction and operation of the Project. An air quality study will be prepared to establish baseline conditions, and project and cumulative impacts. The proposed Project's estimated air emissions will be compared to emissions thresholds of the San Joaquin Valley Air Pollution Control District. The EIR will describe existing air quality conditions within the San Joaquin Valley Air Basin and will evaluate the proposed Project's potential air quality impacts. Potential air quality emissions include fugitive dust and combustion exhaust. The EIR will also include a discussion of greenhouse gas emissions and the proposed Project's contribution to potential cumulative impacts on global climate change.

Biological Resources

Construction of the proposed Project may modify biotic habitats used by sensitive plant and wildlife species. As such, site development may be regulated by state or federal agencies, subject to the provisions of CEQA, and/or covered by policies and ordinances of Tulare County. A biological resources report will be prepared to address issues related to: 1) the potential for sensitive biological resources occurring on the Project site; 2) the federal, state, and local laws regulating such resources; and 3) mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. The proposed Project's potential to impact biological resources will be analyzed in the EIR.

Cultural and Tribal Cultural Resources

Although the proposed Project will be constructed on previously disturbed land, it cannot be definitively concluded that cultural resources are absent. A search of the Southern San Joaquin Valley Information

Center California Historical Resources Information System (CHRIS) was conducted. The records search identified 10 cultural resources documented within a 0.5-mile radius of the Project site. Six of the 10 resources are recorded within the Project site.

A Sacred Land File (SLF) Search was submitted to the Native American Heritage Commission (NAHC) on October 3, 2019. The NAHC responded on October 8, 2019, stating that the SLF search was completed with "negative" results. The NAHC provided a list of tribes that are traditionally and culturally affiliated with the Project area. The County will fulfill its obligations consistent with tribal consultation pursuant to Assembly Bill 52 using the list provided by the NAHC. In addition, portions of the Project site are located within relative proximity to the White River, which has been known to be associated with cultural resource sites. Depending upon responses from tribal consultation, a cultural resources evaluation may be prepared for this Project. The EIR will examine the proposed Project's potential to affect cultural resources and Tribal cultural resources.

Energy

The EIR will include an analysis of the Project's potential to result in impacts on energy conservation and/or consumption.

Geology/Soils and Mineral Resources

Initial construction, buildout, and operation of the proposed Project on the Project site could result in impacts related to geotechnical hazards, including seismicity of the area, potential for liquefaction and subsidence, potential for soil erosion, soil stability characteristics, and shrink/swell potential of site soils, as applicable.

Mineral resources located in south Tulare County are predominantly sand and gravel resources near waterways. A portion of the Project site (APN No. 339-050-004) is located immediately adjacent to the White River. The White River is mapped as MRZ-3a, which are areas considered to have a moderate potential for the discovery of economic mineral deposits.

It is currently unknown whether the proposed Project site soils have the potential to contain paleontological resources. If such resources exist on the site, ground-disturbing activities could result in potentially significant impacts. A geological evaluation of the proposed Project site will be conducted to establish baseline, project, and cumulative impacts related to geology, soils, mineral resources, and paleontological resources.

Greenhouse Gas Emissions

The temporary construction activities associated with the proposed Project, which would involve operation of heavy off-road equipment, on-road trucks, and construction worker commute trips, would generate greenhouse gas (GHG) emissions. However, as a solar facility, the proposed Project is expected to displace traditional sources of electricity production that involves combustion energy sources (e.g., burning coal, fuel oil, or natural gas). As such, the provision of solar energy by the proposed Project would produce GHG-free electricity that is anticipated to offset GHGs that would otherwise be generated by traditional sources of electricity. The potential impacts associated with GHG emissions generated during construction of the Project and the potential GHG offsets resulting from operation of the Project will be evaluated in the EIR. The proposed Project's estimated greenhouse gas emissions will be evaluated for consistency with the Tulare County 2030 General Plan, the Tulare County Climate Action Plan, and the State's 2017 Scoping Plan.

Hazards and Hazardous Materials

There are no known hazards or hazardous materials located within the proposed Project site, nor is the proposed Project site located on a Cortese List site. The EIR will evaluate the potential for the proposed Project to result in, or be affected by, impacts associated with hazards and hazardous materials.

Hydrology/Water Quality

According to the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (Map Number 06107C1975E and 06107C2325E), the majority of the Project site is located within Zone X. Zone X is an area determined to be outside the 0.2 percent annual chance floodplain. Portions of the solar farm site (APNs 339-050-004, 339-050-013, and 339-070-026) and transmission/collector line near the White River are mapped as Zone A. Zone A is an area subject to a 1 percent or greater annual chance of flooding in any given year. The EIR will analyze the proposed Project's impacts on hydrology and water quality.

Land Use/Planning

The EIR will describe the proposed Project's potential effects on existing and planned uses. The majority of the Project site is zoned as AE-40 (Exclusive Agriculture – 40 acre minimum), with exception of the northernmost parcels (APN Nos. 321-040-007, -008, -011, and -025) which are zoned AE-10 (Exclusive Agriculture – 10 acre minimum). The Project site is designated as Extensive Agriculture, Valley Agricultural, and Valley Agriculture Extension by the Tulare County General Plan. These General Plan and zoning designations expressly allow the installation of renewable solar power with a Special Use Permit; however, the EIR will provide a discussion of relevant local plans and policies because conflicts could potentially result in environmental impacts.

Noise

The EIR will describe the noise levels associated with proposed Project construction and operations and will compare these levels to applicable noise thresholds to determine whether the proposed Project would result in a significant noise impact. A noise study will be prepared to establish baseline, project, and cumulative impacts.

Population/Housing

The EIR will evaluate the Project's effect on population and housing in the local area based on estimations of Project employment and distribution of the employees by place of residence.

Public Services

The EIR will evaluate the proposed Project's potential to create an adverse impact to schools, and will also evaluate effects on local police and fire services along with parks and regional recreational facilities.

Recreation

Although unlikely due to the nature of the proposed Project, the increase in use of parks and other recreational facilities near the vicinity of the Project will be analyzed in the EIR.

Transportation/Traffic

The EIR will evaluate the proposed Project's impact on regional and local transportation facilities based on a transportation analysis that will assess both construction-related impacts (heavy truck trips and construction worker trips), as well as operational impacts (employee and visitor trips). Impacts to roadways would be limited to construction-related activities of the Project. Construction-related vehicles would primarily access the Project site from State Route 65, and may also utilize county roads including, but not limited to, Richgrove Drive, Avenue 24, and Avenue 56. The Tulare County General Plan 2030 Update considers Level of Service (LOS) D as the minimum acceptable LOS standard during peak hours for County roadways and intersections. According to Caltrans' SR 65 Transportation Concept Report dated June 2002, the acceptable Concept LOS is C for SR 65. A traffic impact study will be prepared to establish a baseline, and to evaluate project and cumulative impacts for the proposed Project in consultation with the County of Tulare, the Tulare County Association of Governments, and Caltrans. Similarly, the EIR will examine alternative traffic distribution.

Utilities/Service Systems

The proposed Project would not require extension/connection to urban services such as potable water service, wastewater treatment, and stormwater drainage. However, the EIR will analyze drainage, water, wastewater, natural gas, and electrical systems and the proposed Project's impact on these systems. The EIR will also describe the existing solid waste facilities that serve the Project site.

Wildfire

According to the Fire Hazard Severity Zones map published by the California Department of Forestry and Fire Protection (CalFire), the portions of the Project site located east of State Route 65 are within a State Responsibility Area classified as having moderate potential for wildfires. The EIR will evaluate the proposed Project's impacts related to wildfire.

GROWTH INDUCEMENT

The EIR will evaluate the proposed Project's potential for growth inducement resulting from the construction and operation of the solar energy facility, as well as new demand for housing, and goods and services. The effect of primary and secondary increases in employment and economic activity will be discussed.

CUMULATIVE IMPACTS

The EIR will discuss the incremental contribution of the proposed Project to cumulative effects of other past, current, and planned and reasonably foreseeable Projects in the vicinity. The summary of projects method will be used where applicable. Also, to the extent feasible, the Cumulative Impacts section will quantify the degree of severity of any cumulative impact.

ALTERNATIVES EVALUATED IN THE EIR

In accordance with the CEQA Guidelines Section 15126.6, the EIR will describe a reasonable range of alternative to the proposed Project that are capable of meeting most of the proposed Project's objectives, but would avoid or substantially lessen any of the significant effects of the proposed Project. The EIR will also identify any alternatives that were considered but rejected by the Lead Agency as infeasible and briefly explain the reasons why. The EIR will also provide an analysis of the No Project Alternative.

OPPORTUNITY FOR PUBLIC COMMENT

Interested individuals, groups, and agencies may provide to the County of Tulare Resource Management Agency, Planning Branch, written comments on topics to be addressed in the EIR for the proposed Project. Because of time limits mandated by state law, comments should be provided no later than ***5:00 p.m. March 16, 2020***. Agencies that will need to use the EIR when considering permits or other approvals for the proposed Project should provide the name of a staff contact person. Please send all comments to:

Hector Guerra, Chief Environmental Planner
Tulare County Resource Management Agency
Economic Development and Planning Branch
5961 South Mooney Boulevard
Visalia, CA 93277-9394
E-mail: hguerra@co.tulare.ca.us
Phone: (559) 624-7121

APPENDIX L.3
COMMENT LETTERS RECEIVED

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

February 18, 2020

Hector Guerra, Chief Environmental Planer
Tulare County
5961 S. Mooney Blvd.
Visalia, CA 93277-9394

Re: 202002036, Rexford Solar Farm Project, Tulare County

Dear Mr. Guerra:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Staff Services Analyst

cc: State Clearinghouse

Department of Toxic Substances Control

Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

March 2, 2020

Mr. Hector Guerra
Chief Environmental Planner
Tulare County
5961 S. Mooney Boulevard
Visalia, California 93277-9394

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING FOR REXFORD SOLAR FARM – DATED FEBRUARY 14, 2020 (STATE CLEARINGHOUSE NUMBER: UNKNOWN)

Dear Mr. Guerra:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation of a Draft Environmental Impact Report (EIR) and Scoping meeting for the Rexford Solar Farm. The project includes the construction and operation of an up to 700 megawatt alternative current (MW AC) solar photovoltaic (PV) facility and an up to 700 MW AC energy storage system (ESS) on approximately 3,782 gross acres of land (on 40 discontiguous parcels) in unincorporated south-central Tulare County, California. The proposed Project would include aground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, ESS, access roads and fencing, and on-site substation. An operations and maintenance building may be constructed on the site.

DTSC recommends that the following issues be evaluated in the EIR Hazards and Hazardous Materials section:

1. The EIR should acknowledge historic or future activities on or near the project site that may have the potential to result in the release of hazardous wastes/substances on the project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.

2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil DTSC, recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the EIR.

3. If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/aml_handbook.pdf).

4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers* (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118.pdf).

5. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf).

6. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Ag-Guidance-Rev-3-August-7-2008-2.pdf).

DTSC appreciates the opportunity to review the EIR. Should you need any assistance with an environmental investigation, please submit a request for Lead Agency Oversight Application, which can be found at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/VCP_App-1460.doc. Additional information regarding voluntary agreements with DTSC can be found at: https://dtsc.ca.gov/brownfields/.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

Sincerely,

Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Ms. Lora Jameson, Chief
Site Evaluation and Remediation Unit
Department of Toxic Substances Control
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Mr. Dave Kereazis
Office of Planning & Environmental Analysis
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DEPARTMENT OF TRANSPORTATION
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Making Conservation
a California Way of Life

March 13, 2020

06-TUL-65-2.82 - 7.26
NOP
REXFORD SOLAR FARM
700 MW SOLAR FACILITY
700 MW ENERGY STORAGE SYSTEM

Mr. Hector Guerra, Chief Environmental Planner
Tulare County Resource Management Agency
Economic Development and Planning Branch
5961 South Mooney Boulevard
Visalia, CA 93277-9394

Dear Mr. Guerra:

Thank you for the opportunity to review the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR), proposing a 700-Megawatt (MW)Solar Facility and a 700-Megawatt AC Energy Storage System (ESS) located on 40 parcels totaling approximately 3,782 acres. Some of the Project parcels are located west and east of the community of Ducor and some are located approximately 2½ miles south of Ducor and north of the community of Richgrove. The Project site is generally located south of Avenue 68, north of Avenue 12 and is bisected by State Route (SR) 65.

- The Project would include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, ESS, access roads and fencing, and on-site substation.

- The proposed Project would also involve the construction of both transmission and collector lines.

- The Project transmission and/or collector lines would be located along portions of Road 232, Avenue 56, Avenue 64, Road 224, Road 240, Avenue 32, Richgrove Drive, and SR 65. The total length of the transmission and/or collector lines would be approximately 13 miles in length.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. The NOP indicates that the DEIR will evaluate the Project's impact on regional and local transportation facilities based on a transportation analysis that will assess both construction-related impacts (heavy truck trips and construction worker trips), as well as operational impacts (employee and visitor trips).

2. The NOP indicates that a Traffic Impact Study (TIS) will be prepared to establish a baseline, identify traffic generation rates and trip distribution percentages, and to evaluate project and cumulative impacts for the proposed Project in consultation with the County of Tulare, the Tulare County Association of Governments, and Caltrans.

Caltrans November 25, 2019 comment letter, per the initial Project review under Special Use Permit (PSP) 19073, are still valid as follows:

3. Project information under Construction Activities indicated:
   - Construction would require up to 1,000 workers per day.
   - Construction is expected to begin at the end of 2021 and would take approximately 12 to 14 months.

4. Caltrans requests that truck and equipment trips be restricted to off peak traffic hours.

5. Caltrans recommends that truck/equipment trips should be spaced to avoid vehicle congestion on SR 65 and to minimize interference with commute traffic.

6. Caltrans recommends that direct access to SR 65 for construction related traffic should not be permitted for the Project parcel sites that are directly adjacent to SR 65.

7. Water trucks should be present on site and utilized during the construction activities, especially grading and/or earth work to minimize dust in the area.

8. Caltrans recommends that any personal or construction related vehicles should not be permitted to park along SR 65.

9. According to the SR 65 Transportation Concept Report (TCR), segments 5 & 6 of SR 65, in the vicinity of this project, are planned as a 4-lane expressway within a total of 240 feet of right-of-way (120 feet from the centerline). Caltrans is developing plans to widen SR 65 to a 4-lane divided expressway in 4-phased segments from the SR 65/SR 190 interchange south to the Tulare/Kern county line. Caltrans has completed widening from the SR 65/SR 190 interchange south to Avenue 124.

10. Phases 3 and 4 (in the vicinity of the project site) of the widening project will widen SR 65 with 2 new lanes on the *east* side of the current highway alignment. This will result in the need for additional right-of-way ranging from approximately 50 feet to 140 feet.

11. Caltrans recommends that a coordination meeting be held with the applicant, Tulare County (lead agency), and Caltrans to discuss the specifics of the widening project and right-of-way impacts to the Project.

12. An encroachment permit will be required for work to construct Project transmission and/or collector lines located within or along SR 65.

13. An encroachment permit must be obtained for all proposed activities for placement of encroachments within, under or over the State highway rights-of-way. The Streets and Highways Code Section 670 provides Caltrans discretionary approval authority for projects that encroach on the State Highway System. Encroachment permits do not run with the land. A change of ownership requires a new permit application. Only the legal property owner or his/her authorized agent can pursue obtaining an encroachment permit. The Permit Department and the Environmental Planning Branch will review and approve the activity and work in the State right-of-way before an encroachment permit is issued. **Please call the Caltrans Encroachment Permit Office - District 6: 1352 W. Olive, Fresno, CA 93778, at (559) 488-4058. Please review the permit application checklist at: https://forms.dot.ca.gov/v2Forms/servlet/FormRenderer?frmid=TR0402&distpath=MAOTO&brapath=PERM**

14. Prior to an encroachment permit application submittal, the project proponent is required to schedule a "Pre-Submittal" meeting with District 6 Encroachment Permit Office. **Please contact District 6 Encroachment Permit Office at (559) 488-4058 to schedule this meeting.**

If you have any other questions, please call me at (559) 488-7396.

Sincerely,

DAVID DEEL
Associate Transportation Planner
Transportation Planning – North

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

April 6, 2020

Hector Guerra, Chief Environmental Planner
Tulare County Resource Management Agency
5961 South Mooney Boulevard
Visalia, California 93277

Subject: Rexford Solar Farm (Project)
Notice of Preparation (NOP)
SCH No. 2020020326

Dear Mr. Guerra:

The California Department of Fish and Wildlife (CDFW) received a NOP for a draft Environmental Impact Report (DEIR) from the Tulare County Resource Management Agency for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code. While the comment period may have passed, CDFW would appreciate if the Tulare County Resource Management Agency will still consider our comments.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statue for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources. CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on Project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

PROJECT DESCRIPTION SUMMARY

Proponent: 20SD 8ME LLC

Objective: The Project proposes the construction and operation of an up to 700 megawatt alternative current (MW AC) solar photovoltaic (PV) facility and an up to 700 MW AC energy storage system (ESS) on approximately 3,782 gross acres of land (on 40 dis-contiguous parcels) in unincorporated south-central Tulare County, California. The proposed Project would include a ground mounted PV solar power generating system, supporting structures, inverter modules, pad mounted transformers, ESS, access roads and fencing, and on-site substation. An operations and maintenance building may be constructed on the site.

The proposed Project would involve the construction of both transmission and collector lines. Power generated by the proposed Project would be transmitted to the Southern California Edison (SCE) Vestal Substation via an up to 230 kilovolt (KV) overhead

and/or underground gen-tie line. The proposed transmission and/or collector lines would extend along existing roadway rights-of-way from various portions of the Project site (where substations are located) ultimately connecting to the SCE Vestal Substation. The transmission and/or collector lines would be located along portions of Road 232, Avenue 56, Avenue 64, Road 224, Road 240, Avenue 32, Richgrove Drive, and SR 65, or could possibly utilize additional nearby routings. The total length of the transmission and/or collector lines would be approximately 13 miles in length.

Location: The Project is located on approximately 3,782 acres of land near the unincorporated community of Ducor, in south-central Tulare County. The Project sites are generally located south of Avenue 68, west of Road 272, north of Avenue 12, and east of Road 216. The Project sites are bisected by and lies east of State Route 65. The Project is located in the Ducor and Richgrove U.S. Geological Survey 7.5-minute topographic quadrangles. The Public Lands Survey System maps the area as Township 23 south, Range 27 east, Sections 20-23, and 25-36; Township 23 south, Range 28 east, Sections 30, 31; and Township 24 south, Range 27 east, Sections 01-04, 08-11, 15-22, and 27-29.

Timeframe: N/A

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist the Tulare County Resource Management Agency in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

There are many special-status resources present adjacent to the Project sites that these resources may need to be evaluated and addressed prior to any approvals that would allow ground-disturbing activities. CDFW is concerned regarding potential impacts to special-status species including, but not limited to, the State threatened Swainson's hawk (*Buteo swainsoni*), the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*), the State candidate-listed as endangered Crotch bumble bee (*Bombus crotchii*), the State and federally endangered California jewelflower (*Caulanthus californicus*), the State endangered and federally threatened San Joaquin adobe sunburst (*Pseudobahia peirsonii*), and the State species of special concern burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), and western spadefoot toad (*Spea hammonii*).

I. Environmental Setting and Related Impact

Would the Project 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 CDFW or the United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Swainson's Hawk (SWHA)

Issue: SWHA have the potential to nest near and forage within the Project sites. The proposed Project will involve activities near large trees that may serve as potential nest sites.

Specific impacts: Without appropriate avoidance and minimization measures for SWHA, potential significant impacts that may result from Project activities include: nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality. Any take of SWHA without appropriate incidental take authorization would be a violation of Fish and Game Code.

Evidence impact is potentially significant: SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley limits their local distribution and abundance (CDFW 2016). Approval of the Project will lead to subsequent ground-disturbing activities that involve noise, groundwork, and movement of workers that could affect nests and has the potential to result in nest abandonment and loss of foraging habitat, significantly impacting local nesting SWHA.

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to SWHA associated with the Project, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the Environmental Impact Report (EIR) prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 1: SWHA Surveys

CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the survey methods developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC 2000) prior to project implementation. The SWHA TAC recommends a 0.5-mile survey distance from the limits of disturbance. The survey protocol includes early season surveys to assist the project proponent in implementing necessary avoidance and minimization measures, and in identifying active nest sites prior to initiating ground-disturbing activities.

Recommended Mitigation Measure 2: SWHA No-disturbance Buffer

If ground-disturbing activities are to take place during the normal bird breeding season (March 1 through September 15), CDFW recommends that additional pre-activity surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of Project implementation to ensure that no SWHA have begun nesting activities near the Project sites. CDFW recommends a minimum no-disturbance buffer of ½-mile be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

Recommended Mitigation Measure 3: SWHA Take Authorization

CDFW recommends that in the event an active SWHA nest is detected during surveys and a ½-mile no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the issuance of an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081(b) is necessary to comply with CESA.

Recommended Mitigation Measure 4: Loss of SWHA Foraging Habitat

CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development is advised.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of ¾ acre of HM land for each acre of development is advised.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of ½ acre of HM land for each acre of development is advised.

Recommended Mitigation Measure 5: SWHA Nest Trees

CDFW recommends that the removal of known raptor nest trees, even outside of the nesting season, be replaced with an appropriate native tree species planting at a

ratio of 3:1 at or near the Project sites or in another area that will be protected in perpetuity to reduce impacts resulting from the loss of nesting habitat.

COMMENT 2: San Joaquin Kit Fox (SJKF)

Issue: SJKF have been documented to occur within the vicinity of the Project sites (CDFW 2020). Review of aerial imagery indicates that some of the Project sites are bordered by annual grassland. SJKF den in right-of-ways, vacant lots, etc., and populations can fluctuate over time. Presence/absence in any one year is not necessarily a reliable indicator of SJKF potential to occur on a site. SJKF may be attracted to project sites due to the type and level of ground-disturbing activities and the loose, friable soils resulting from intensive ground disturbance. As a result, there is potential for SJKF to colonize the Project sites or to occupy adjacent grassland.

Specific impact: Without appropriate avoidance and minimization measures for SJKF, potential significant impacts include den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

Evidence impact is potentially significant: Habitat loss resulting from agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013). The Project sites are adjacent to some of the only remaining undeveloped land in the vicinity, which is otherwise intensively managed for agriculture. Therefore, subsequent ground-disturbing activities have the potential to significantly impact local SJKF populations.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact Shortcoming)
To evaluate potential impacts to SJKF associated with the Project, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 6: SJKF Habitat Assessment

CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project sites or its immediate vicinity contains suitable habitat for SJKF.

Recommended Mitigation Measure 7: SJKF Surveys

CDFW recommends assessing presence/absence of SJKF by conducting surveys following the USFWS "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance" (2011). Specifically, CDFW

advises conducting these surveys in all areas of potentially suitable habitat no less than 14 days and no more than 30 days prior to beginning of ground disturbing activities.

Recommended Mitigation Measure 8: SJKF Take Authorization

SJKF detection warrants consultation with CDFW to discuss how the Project will avoid take. If take cannot be avoided, then an (ITP), pursuant to Fish and Game Code § 2081(b), is necessary to comply with CESA.

COMMENT 3: Crotch Bumble Bee (CBB)

Issue: On June 28, 2019, the Fish and Game Commission published findings of its decision to advance CBB to State candidate for listing as endangered. Pursuant to Fish and Game Code section 2074.6, CDFW has initiated a status review report to inform the Commission's decision on whether listing of CBB, pursuant to CESA, is warranted. During the candidacy period, consistent with CEQA Guidelines section 15380, the status of the CBB as an endangered candidate species under CESA (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. It is unlawful to import into California, export out of California, or take, possess, purchase, or sell within California, CBB and any part or product thereof, or attempt any of those acts, except as authorized pursuant to CESA. Under Fish and Game Code section 86, take means to hunt, pursue, catch, capture, or kill, or to attempt to hunt pursue, catch, capture, or kill. Consequently, take of CBB during the status review period is prohibited unless authorization pursuant to CESA is obtained.

CBB have the potential to occur within the Project sites. Suitable CBB habitat includes areas of grasslands and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest in late February through late October underground in abandoned small mammal burrows, but may also nest under perennial bunch grasses or thatched annual grasses, under brush piles, in old bird nests, and in dead trees or hollow logs (Williams et al. 2014; Hatfield et al. 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014). Therefore, ground disturbance and vegetation removal associated with Project implementation has the potential to significantly impact local CBB populations.

Specific impact: Without appropriate avoidance and minimization measures for CBB, potentially significant impacts associated with ground- and vegetation-disturbing activities associated with construction of the Project include loss of foraging plants, changes in foraging behavior, burrow collapse, nest abandonment,

reduced nest success, reduced health and vigor of eggs, young and/or queens, in addition to direct mortality in violation of Fish and Game Code.

Evidence impact is potentially significant: CBB was once common throughout most of the central and southern California; however, it now appears to be absent from most of it, especially in the central portion of its historic range within California's Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years.

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to CBB associated with the Project, CDFW recommends conducting the following evaluation of the Project sites, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 9: CBB Surveys

CDFW recommends that a qualified biologist conduct focused surveys for CBB and their requisite habitat features to evaluate potential impacts resulting from ground- and vegetation-disturbance associated with the Project.

Recommended Mitigation Measure 10: CBB Take Avoidance

If surveys cannot be completed, CDFW recommends that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take.

Recommended Mitigation Measure 11: CBB Take Authorization
If CBB is identified during surveys, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization prior to any ground-disturbing activities may be warranted. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b).

COMMENT 4: San Joaquin adobe sunburst and California Jewelflower

Issue: Aerial imagery shows that some of the Project sites consists of undisturbed grassland habitat. San Joaquin adobe sunburst and California jewelflower are known to occur in the vicinity of the Project sites (CDFW 2020). Without avoidance

and minimization measures, the Project has the potential to take special-status plant species.

Specific impact: Without appropriate avoidance and minimization measures, potential impacts to special-status plant species include inability to reproduce and direct mortality. Unauthorized take of species listed as threatened, endangered, or rare pursuant to CESA or the Native Plant Protection Act is a violation of Fish and Game Code.

Evidence impact would be significant: Special-status plant species are threatened with habitat loss and habitat fragmentation resulting from development, vehicle and foot traffic, and introduction of non-native plant species (CNPS 2020), all of which may be unintended impacts of the Project. Therefore, impacts of the Project have the potential to significantly impact populations of the species mentioned above.

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to special-status plants associated with the Project, CDFW recommends conducting the following evaluation of the Project sites, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 12: Special-Status Plant Focused Surveys

CDFW recommends that the Project sites be surveyed for special-status plants by a qualified botanist following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (CDFW 2018). This protocol, which is intended to maximize detectability, includes identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. In the absence of protocol-level surveys being performed, additional surveys may be necessary.

Recommended Mitigation Measure 13: Special-Status Plant Avoidance

CDFW recommends special-status plant species be avoided whenever possible by delineation and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

Recommended Mitigation Measure 14: Special-Status Plant Take Authorization

If a State-listed plant species is identified during botanical surveys, consultation with CDFW is warranted to determine if the Project can avoid take. However, if take cannot be avoided, take authorization would need to occur through issuance of an ITP by CDFW to comply with Fish and Game Code section 1900 and California Code of Regulations, title 14, section 786.9, subdivision (b).

COMMENT 5: Burrowing Owl (BUOW)

Issue: BUOW may occur within and/or adjacent to the Project sites. BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Habitat both within and bordering the Project sites, supports grassland habitat (CDFW 2020).

Specific impact: Potentially significant direct impacts associated with subsequent activities and development include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Evidence impact is potentially significant: BUOW rely on burrow habitat year-round for their survival and reproduction. Habitat loss and degradation are considered the greatest threats to BUOW in California's Central Valley (Gervais et al. 2008). The Project sites contain and is bordered by some of the only remaining undeveloped land in the vicinity. Therefore, subsequent ground-disturbing activities associated with Project approval have the potential to significantly impact local BUOW populations. In addition, and as described in CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)
To evaluate potential impacts to BUOW associated with the Project, CDFW recommends conducting the following evaluation of the Project sites, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 15: BUOW Surveys

CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012). Specifically,

CBOC and CDFW's Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (April 15 to July 15), when BUOW are most detectable.

Recommended Mitigation Measure 16: BUOW Avoidance

CDFW recommends no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

COMMENT 6: Western spadefoot toad

Issue: Western spadefoot inhabit grassland habitats, breed in seasonal wetlands, and seek refuge in upland habitat where they occupy burrows outside of the breeding season (Thomson et al. 2016). Review of aerial imagery indicates that the Project contains these requisite habitat elements.

Specific impact: Without appropriate avoidance and minimization measures for western spadefoot, potentially significant impacts associated with ground disturbance include collapse of small mammal burrows, inadvertent entrapment, loss of upland refugia, water quality impacts to breeding sites, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Evidence impact is potentially significant: Habitat loss and fragmentation resulting from agricultural and urban development is the primary threat to western spadefoot (Thomson et al. 2016). The Project sites are within the range of western spadefoot and contains suitable upland habitat (i.e., grasslands interspersed with burrows) and breeding habitat (i.e., vernal pools and swales). As a result, ground-disturbing activities associated with development of the Project sites have the potential to significantly impact local populations of this species.

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to western spadefoot associated with the Project, CDFW recommends conducting the following evaluation of the Project sites, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 17: Western Spadefoot Surveys

CDFW recommends that a qualified biologist conduct focused surveys for western spadefoot and their requisite habitat features to evaluate potential impacts resulting from ground- and vegetation-disturbance.

Recommended Mitigation Measure 18: Western Spadefoot Avoidance

Avoidance whenever possible is encouraged via delineation and observance of a 50-foot no-disturbance buffer around burrows.

COMMENT 7: American Badger

Issue: American badger have the potential to occur on the Project sites. Badgers occupy sparsely vegetated land cover with dry, friable soils to excavate dens, which they use for cover, and that support fossorial rodent prey populations (i.e. ground squirrels, pocket gophers, etc.) (Zeiner et. al 1990). The Project sites may support these requisite habitat features. Therefore, the Project has the potential to impact American badger.

Specific impact: Without appropriate avoidance and minimization measures for American badger, potentially significant impacts associated with ground disturbance include direct mortality or natal den abandonment, which may result in reduced health or vigor of young.

Evidence impact is potentially significant: Habitat loss is a primary threat to American badger (Gittleman et al. 2001). The Project will involve construction of an approximately 27-mile long trail, resulting in a high degree of land conversion and potential habitat fragmentation. As a result, ground-disturbing activities have the potential to significantly impact local populations of American badger.

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to American badger associated with the Project, CDFW recommends conducting the following evaluation of the Project sites, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Recommended Mitigation Measure 19: American Badger Surveys

If suitable habitat is present, CDFW recommends that a qualified biologist conduct focused surveys for American badger and their requisite habitat features (dens) to evaluate potential impacts resulting from ground- and vegetation-disturbance.

Recommended Mitigation Measure 20: American Badger Avoidance

Avoidance whenever possible is encouraged via delineation and observation of a 50-foot no-disturbance buffer around dens until it is determined through non-invasive means that individuals occupying the den have dispersed.

II. Editorial Comments and/or Suggestions

Lake and Streambed Alteration: The Project is subject to CDFW's regulatory authority pursuant Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake; or (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent, such as the White River adjacent to the Project sites, as well as those that are perennial in nature.

For additional information on notification requirements, please contact our staff in the Lake and Streambed Alteration Program at (559) 243-4593. It is important to note, CDFW is required to comply with CEQA, as a Responsible Agency, when issuing a Lake or Streambed Alteration Agreement. If inadequate, or no environmental review, has occurred, for the Project activities that are subject to notification under Fish and Game Code 1602, CDFW will not be able to issue the Final Lake and Streambed Alteration Agreement until CEQA analysis for the project is complete. This may lead to considerable Project delays.

Nesting birds: CDFW encourages that Project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends

that surveys cover a sufficient area around the Project sites to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts (i.e. nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction areas would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

Federally Listed Species: CDFW recommends consulting with the USFWS on potential impacts to federally listed species including, but not limited to, SJKF, San Joaquin adobe sunburst, and California jewelflower. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground disturbing activities.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CDFW appreciates the opportunity to comment on the Project to assist the Tulare County Resource Management Agency in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (https://www.wildlife.ca.gov/Conservation/Survey-Protocols). If you have any questions, please contact Jim Vang, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014 extension 254, or by electronic mail at Jim.Vang@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

Attachment

cc: United States Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

ec: Linda Connolly
California Department of Fish and Wildlife

Literature Cited

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Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: Rexford Solar Farm Project

SCH No.: 2020020326

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
Before Disturbing Soil or Vegetation	
Mitigation Measure 1: SWHA Surveys	
Mitigation Measure 3: SWHA Take Authorization	
Mitigation Measure 4: Loss of SWHA Foraging Habitat	
Mitigation Measure 5: SWHA Nest Trees	
Mitigation Measure 6: SJKF Habitat Assessment	
Mitigation Measure 7: SJKF Surveys	
Mitigation Measure 8: SJKF Take Authorization	
Mitigation Measure 9: CBB Surveys	
Mitigation Measure 11: CBB Take Authorization	
Mitigation Measure 12: Special-Status Plant Focused Surveys	
Mitigation Measure 14: Special-Status Plant Take Authorization	
Mitigation Measure 15: BUOW Surveys	
Mitigation Measure 17: Western Spadefoot Surveys	
Mitigation Measure 19: American Badger Surveys	
During Construction	
Mitigation Measure 2: SWHA No-disturbance Buffer	
Mitigation Measure 10: CBB Take Avoidance	
Mitigation Measure 13: Special-Status Plant Avoidance	
Mitigation Measure 16: BUOW Avoidance	
Mitigation Measure 18: Western Spadefoot Avoidance	
Mitigation Measure 20: American Badger Avoidance	

From: Jessica Willis
To: Hector Guerra; Kerri Vera
CC: Felix Christman; Kaelin Manuel
Date: 2/18/2020 3:04 PM
Subject: Re: NOP for Rexford Solar

Good afternoon Kerri.

Thank you for your speedy response. I look forward to working with your Tribe regarding this project. The information you requested will be submitted for your review.

Have a wonderful week.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

>>> Kerri Vera <tuleriverenv@yahoo.com> 2/18/2020 2:38 PM >>>
Hello Mr. Guerra,
We have received the email from your staff Ms. Jessica Willis regarding the Notice of Preparation of an EIR for the Rexford Solar Farm Project in Ducor Tulare County.
As you may be aware, this area is within the aboriginal territory of the Tule River Tribe and as such, is directly within our area of interest. We view this territory as culturally rich land, hosting a variety of sensitive materials. As such, we would, like to continue consultation with you regarding this project, and are interested in the results from the So. San Joaquin Valley CHRIS search. Furthermore, we would like to request that a cultural resources evaluation be prepared for this project.
Again, thank you for your correspondence efforts. We look forward to working with you further.

Kerri Vera
Director
Department of Environmental Protection
Tule River Tribe

POB 589, Porterville CA 93257
ph(1): 559/783-8892
ph(2): 559/783-9984
fax: 559/783-8932
email: tuleriverenv@yahoo.com

On Friday, February 14, 2020, 11:06:21 AM PST, Jessica Willis <jwillis@co.tulare.ca.us> wrote:

Good morning all.

Please find attached the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Rexford Solar Farm Project. As indicated in the NOP, the proposed project consists of a the construction and operation of a 700 MW solar facility on 40 discontiguous parcels in the unincorporated area of Ducor, Tulare County.

Please submit any comments or recommendations to Mr. Hector Guerra, Chief Environmental Planner, by mail at 5961 S Mooney Blvd, Visalia, CA 93277, or by email at hguerra@co.tulare.ca.us.

If I can be of further assistance, please feel free to contact me by phone or email. Have a wonderful weekend.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

From: Jessica Willis
To: Shana Powers
CC: Hector Guerra
Date: 2/18/2020 8:02 AM
Subject: RE: NOP for Rexford Solar

Good morning Shana.

Thank you for your speedy response. Your request will be incorporated into the EIR prepared for the project. Have a wonderful week.

Respectfully,
Jessica
>>> Shana Powers <SPowers@tachi-yokut-nsn.gov> 2/14/2020 4:04 PM >>>
Dear Jessica,
Thank you for contacting Santa Rosa Rancheria about the proposed project. Based upon tribal history, we see this as a sensitive area, and recommend proceeding with caution. We would like to be notified of any discoveries during construction, but as this area is closer to Tule River, Santa Rosa Rancheria will be deferring to Tule River on this project. Thank you.

Sincerely,

Shana Powers
Cultural Director
SPowers@tachi-yokut-nsn.gov
Office: (559)924-1278 Ext: 4093
Cell: (559)423-3900

From: Jessica Willis <JWillis@co.tulare.ca.us>
Sent: Friday, February 14, 2020 11:06 AM
To: vshenoy@8minute.com; Sheila Sannadan <ssannadan@adamsbroadwell.com>; Ken Woodrow <Kwood8934@aol.com>; D. Gilmore <dagilmore@chp.ca.gov>; David Deel <david.deel@dot.ca.gov>; Michael Navarro <michael.navarro@dot.ca.gov>; Robert Robinson <bbutterbredt@gmail.com>; Hannah Hughes <hannah@lozeaudrury.com>; Komalpreet Toor <komal@lozeaudrury.com>; Michael Lozeau <michael@lozeaudrury.com>; Native Commission <nahc@nahc.ca.gov>; Julie Turner <meindiangirl@sbcglobal.net>; Calvin Rossi <calvin.rossi@sce.com>; James Chuang <Envreview@semprautilities.com>; Leo Sisco <LSisco@tachi-yokut-nsn.gov>; Robert G. Jeff <rgJeff@tachi-yokut-nsn.gov>; Shana Powers <SPowers@tachi-yokut-nsn.gov>; Robert L. Gomez <rgomez@tubatulabal.org>; Neil Peyron <neil.peyron@tulerivertribe-nsn.gov>; Lurana Strong <lurana.strong@usda.gov>; Central RWQCB <CentralValleyFresno@waterboards.ca.gov>; CDFW Tracking <R4CEQA@wildlife.ca.gov>; Kerri Vera <tuleriverenv@yahoo.com>
Cc: Hector Guerra <HGuerra@co.tulare.ca.us>
Subject: NOP for Rexford Solar

Good morning all.

Please find attached the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Rexford Solar Farm Project. As indicated in the NOP, the proposed project consists of a the construction and operation of a 700 MW solar facility on 40 discontiguous parcels in the unincorporated area of Ducor, Tulare County.

Please submit any comments or recommendations to Mr. Hector Guerra, Chief Environmental Planner, by mail at 5961 S Mooney Blvd, Visalia, CA 93277, or by email at hguerra@co.tulare.ca.us.

If I can be of further assistance, please feel free to contact me by phone or email. Have a wonderful weekend.

Jessica Willis
Planner IV
County of Tulare
Resource Management Agency
Phone: (559) 624-7122
E-mail: JWillis@co.tulare.ca.us

From:	Tricia Stever Blattler
To:	Hector Guerra
Cc:	Chris Scheuring(cscheuring@cfbf.com); "Taylor Roschen"
Subject:	3,782 Acre Solar w/Williamson Act parcels near Ducor
Date:	Wednesday, March 4, 2020 9:50:23 AM
Attachments:	image003.jpg 20200226135428802.pdf

Hello Hector,

I wanted to get your insights on a few questions as I'll be noticing this project to my Land Use Committee.

It appears that 3,782 acres of land "the majority" of it is under Williamson Act Contract, and pg 7 states the land is all designated as Farmland of Local Importance.
I know this is an area very dry, often without ground water, and there's a lot of farming that may not sustainable in this area due to expected SGMA cutbacks and water shortages.

Questions that TCFB has:
1. What is the primary use of the ground, and does it continue to meet the uniform rules of the Ag Preserve to retain it's Williamson Act contracts if a majority is converted to solar?
2. Will a Rural Valley Land Plan score be assigned to this project? If so, please send me the scoring information when completed.
3. Has the owner considered exiting the Williamson Act contracts if they are not a compatible use? I understand compatibility findings may be possible, but not if the primary use of the land is no longer agriculture.
4. Will a re-evaluation of the land zoning be considered if the majority of acreage is being converted away from agriculture?
5. Will mitigation be required? If so has that been determined how/where?

I have CC'd Taylor Roschen and Chris Scheuring, who are Land Use and Legal Counsel staff at CA Farm Bureau Federation, and may be interested in this project, or at least in assisting me with comments.

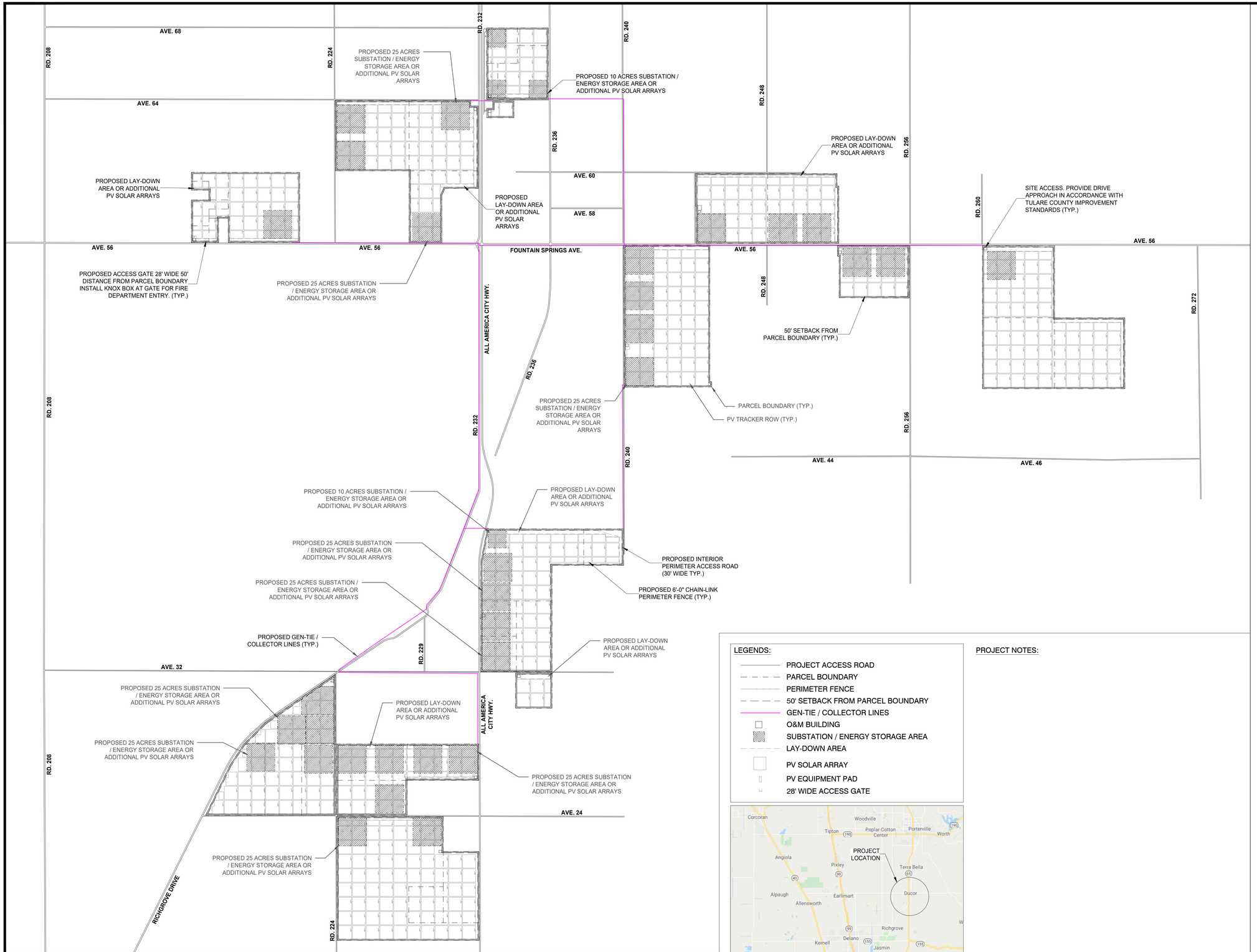
I see there is a scoping meeting on this project March 5 at 1:30 pm at RMA, but I don't think I can attend as the Citrus Mutual Showcase is going on at the same time. If I can break away I'll try to attend.

Thank you,

Tricia Stever Blattler
Executive Director
Tulare County Farm Bureau

PO Box 748
Visalia CA 93279
559-732-8301 Office
559-732-7029 fax
pstever@tulcofb.org

APPENDIX M
SITE PLAN



2 OVERALL SITE PLAN
1" = 1600'

N

LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
- PERIMETER FENCE
- 50' SETBACK FROM PARCEL BOUNDARY
- GEN-TIE / COLLECTOR LINES
- O&M BUILDING
- SUBSTATION / ENERGY STORAGE AREA
- LAY-DOWN AREA
- PV SOLAR ARRAY
- PV EQUIPMENT PAD
- 28' WIDE ACCESS GATE

PROJECT NOTES:

1 OVERALL SITE PLAN
NTS

N

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SHEET TITLE:

SPECIAL USE PERMIT (SUP) PLAN

PROJ. MGR.: SS	PROJ. ENGR.: SC	DATE: 02/07/2020
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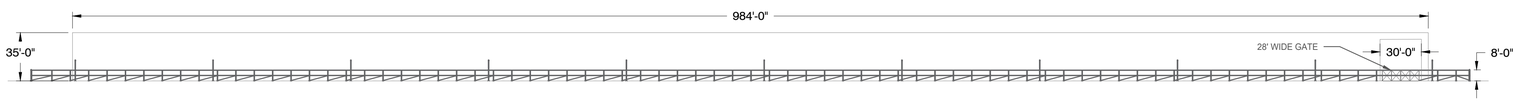
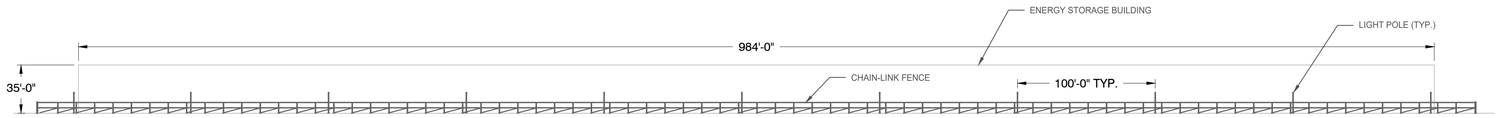
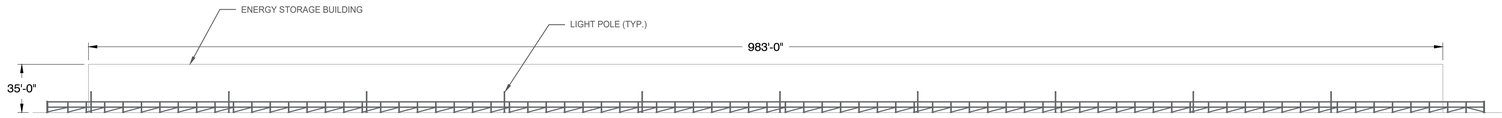
SUP PSP 19-073



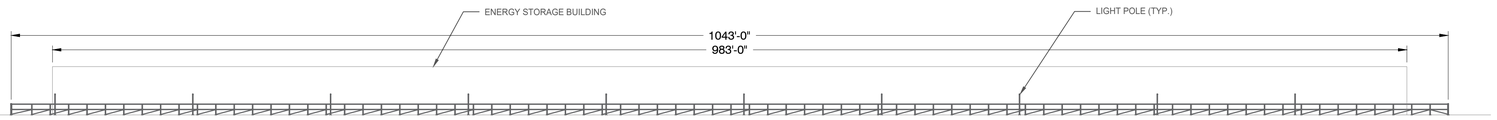
1 ENERGY STORAGE BUILDING - SOUTH WALL
1" = 50'



2 ENERGY STORAGE BUILDING - NORTH WALL
1" = 50'

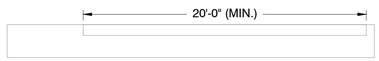


3 ENERGY STORAGE BUILDING - EAST WALL
1" = 50'

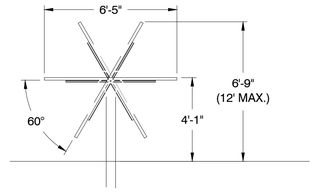


4 ENERGY STORAGE BUILDING - WEST WALL
1" = 50'

AGGREGATE BASE ROAD TO BE COMPACTED TO 85% AND SHALL BE CAPABLE OF SUPPORTING 75,000 LBS.

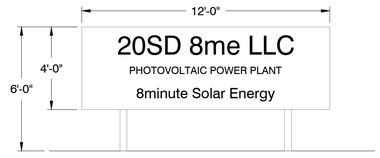


5 ACCESS ROAD (TYP.)
NTS



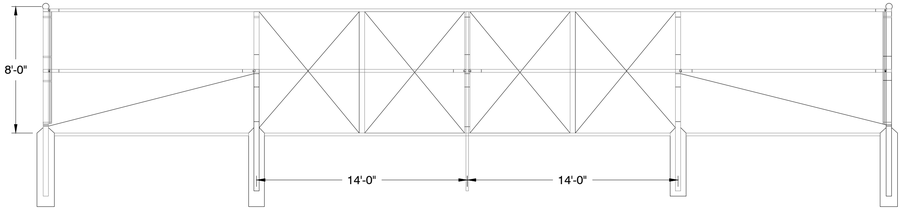
6 PV TRACKER ROW
NTS

NOTE: CONTENTS ON SIGN MAY CHANGE SUBJECT TO FINAL DESIGN



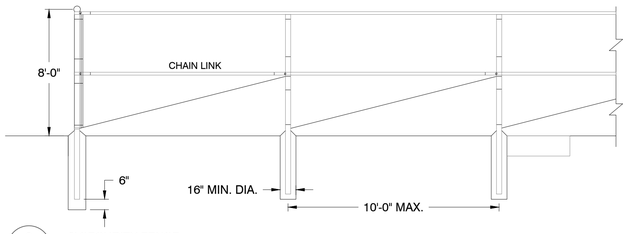
7 ENTRANCE SIGN BOARD
NTS

FENCE NOTES:
1. STRUCTURAL DESIGN AND DETAILS WILL BE COMPLETED DURING FINAL DESIGN
2. FENCE MAY BE TOPPED BY THREE-STRAND OR SIMILAR BARBED WIRE.

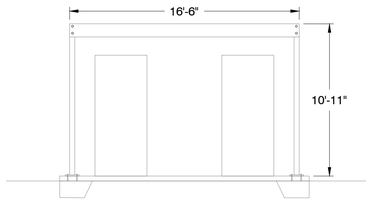


8 28' WIDE SWING GATE
NTS

FENCE NOTE: STRUCTURAL DESIGN AND DETAILS WILL BE COMPLETED DURING FINAL DESIGN.



9 8' SECURITY FENCE
NTS



10 INVERTER STATION PAD
NTS

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SHEET TITLE:

ELEVATIONS

PROJ. MGR.: SS	PROJ. ENGR.: SC	DATE: 02/07/2020
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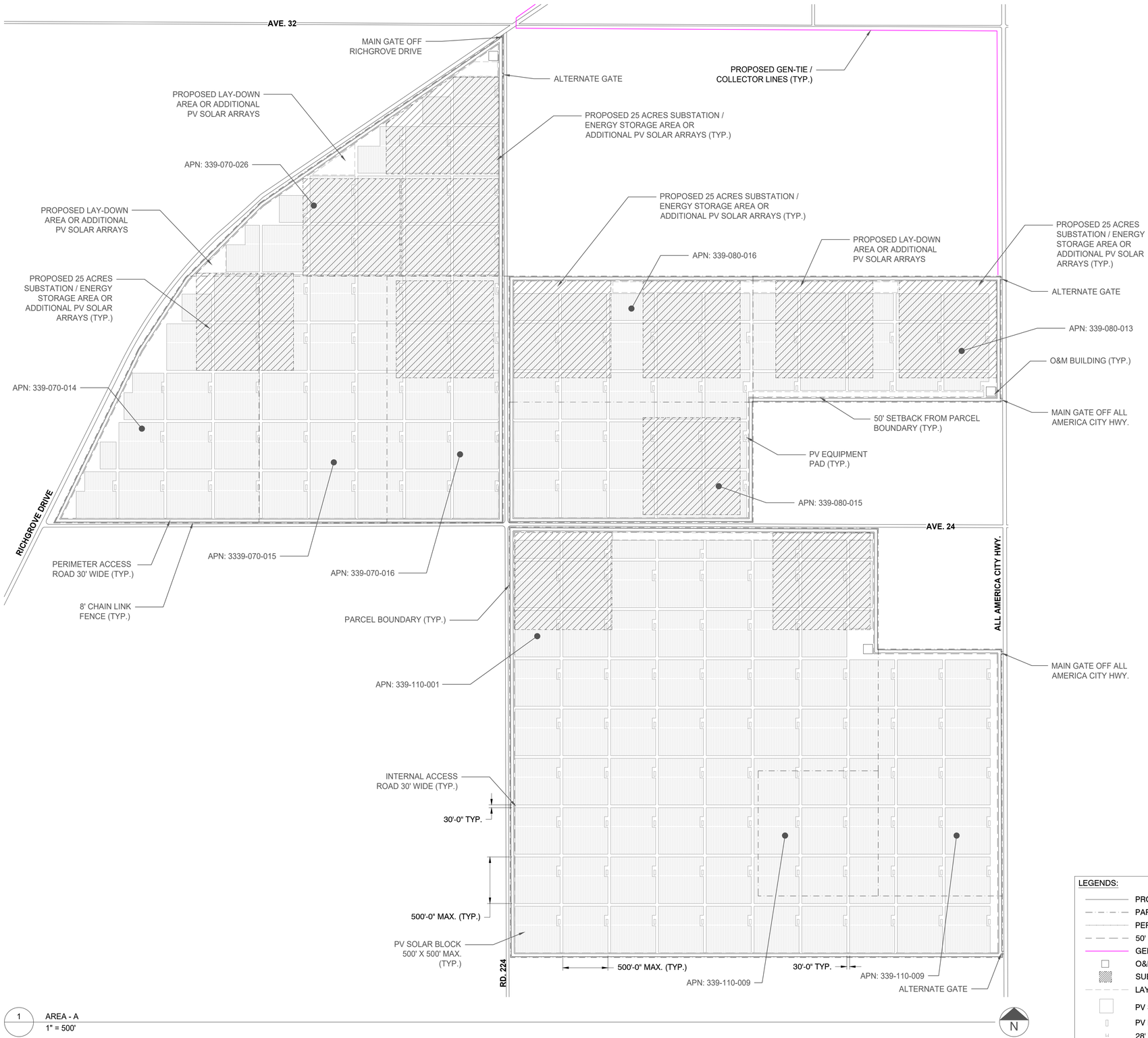
SUP PSP 19-073



1 AREA - A
1" = 500'

LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
- PERIMETER FENCE
- 50' SETBACK FROM PARCEL BOUNDARY
- GEN-TIE / COLLECTOR LINES
- O&M BUILDING
- SUBSTATION / ENERGY STORAGE AREA
- LAY-DOWN AREA
- PV SOLAR ARRAY
- PV EQUIPMENT PAD
- 28' WIDE ACCESS GATE

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SPECIAL USE PERMIT (SUP) AREA - A

PROJ. MGR.: SS	PROJ. ENGR.: SC	DATE: 02/07/2020
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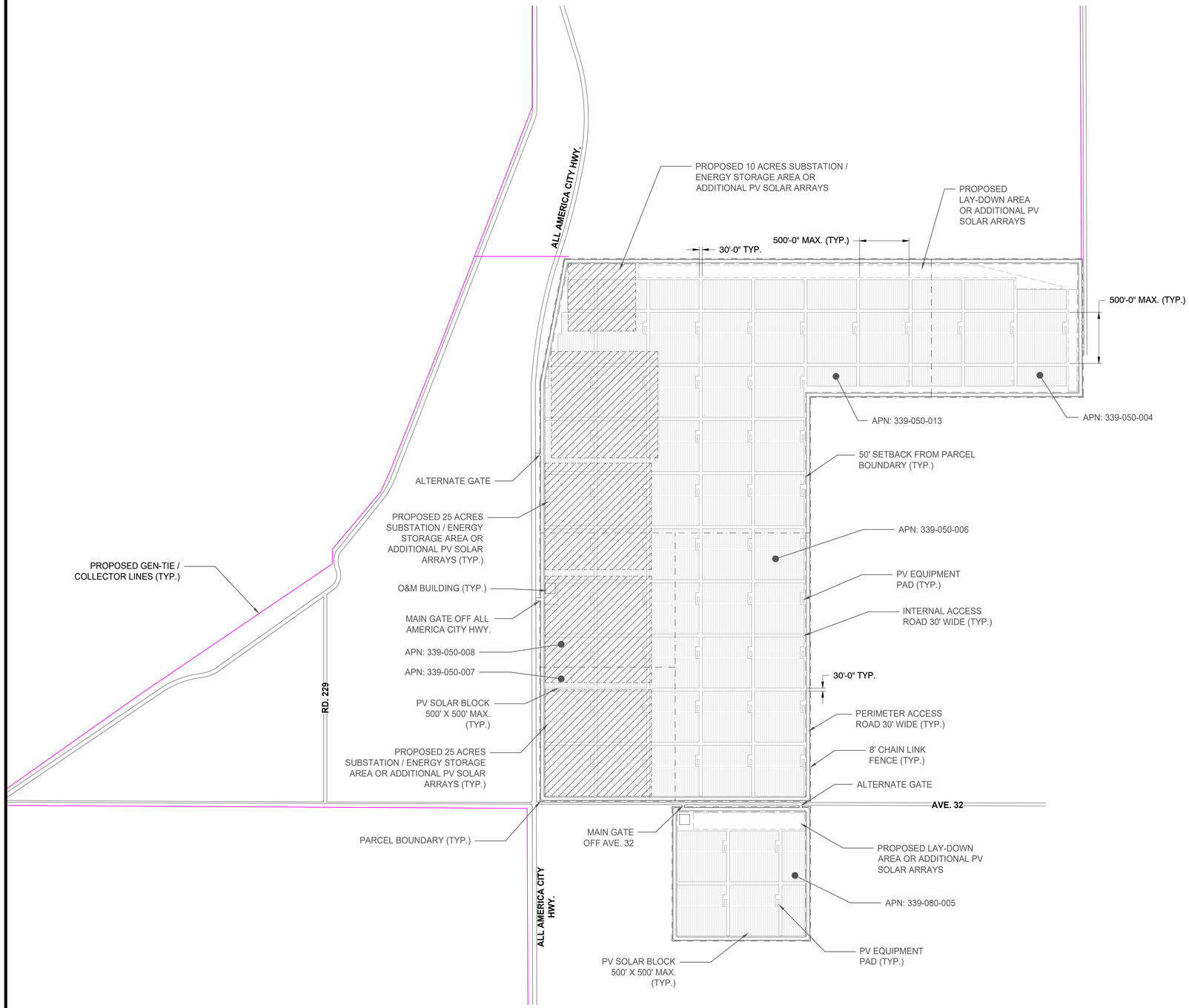
DRAWING NO.

SUP-200



LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
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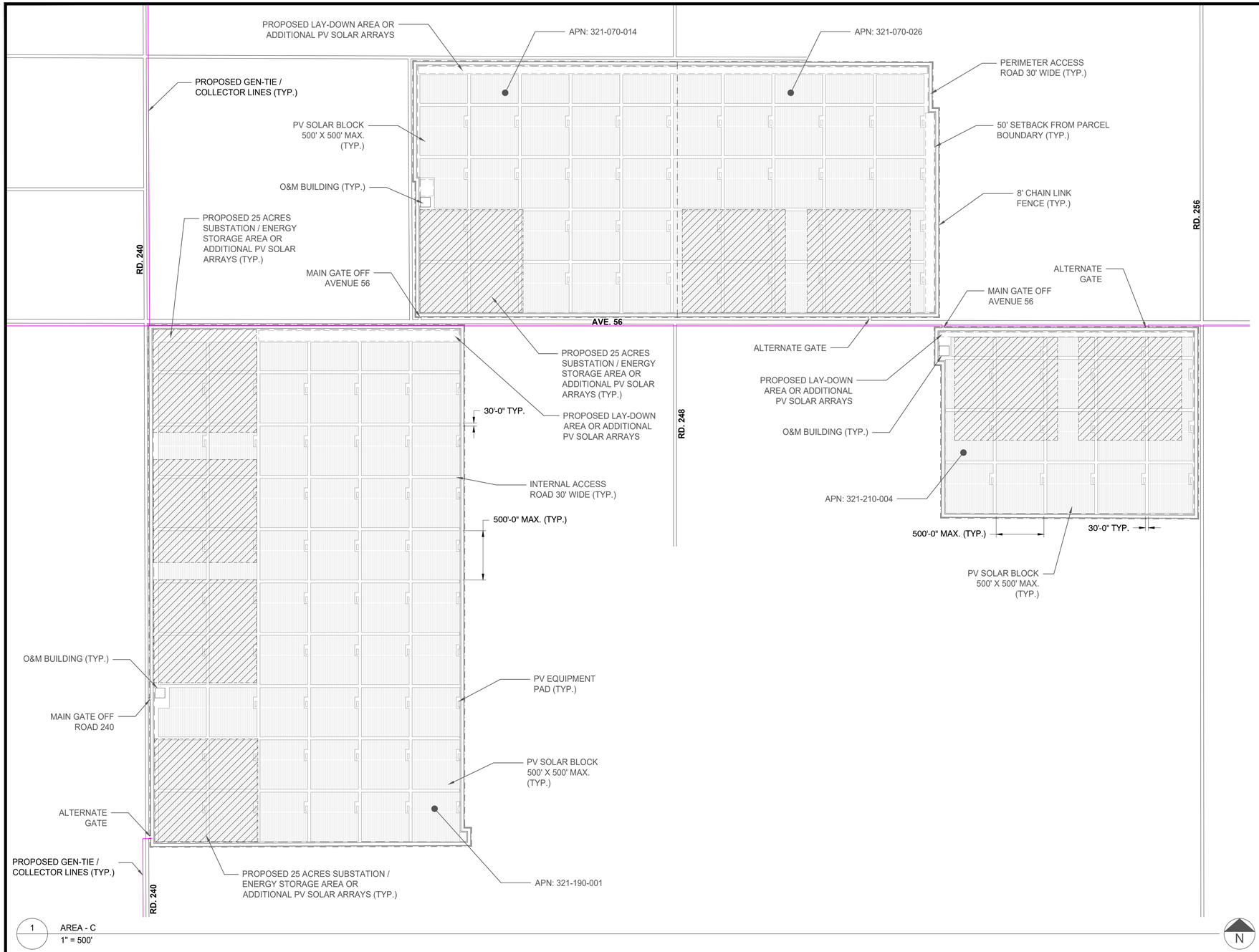
SHEET TITLE:

SPECIAL USE PERMIT (SUP) AREA - B

PROJ. MGR.: SS	PROJ. ENGR.: SC	DATE: 02/07/2020
DRAWN BY: BS	CHECKED BY: GB	SCALE: AS SHOWN

DRAWING NO.

SUP-201



LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
- PERIMETER FENCE
- 50' SETBACK FROM PARCEL BOUNDARY
- GEN-TIE / COLLECTOR LINES
- O&M BUILDING
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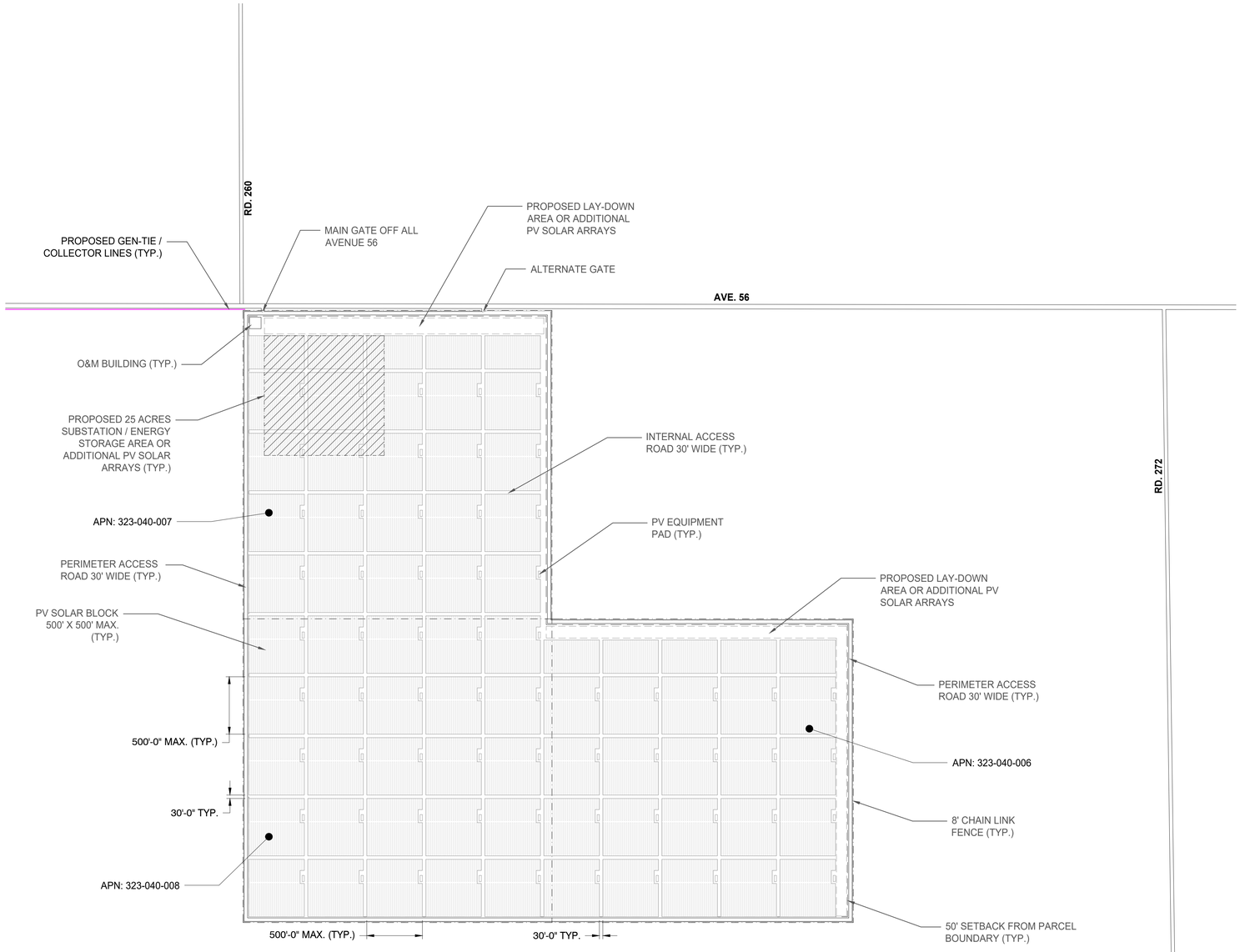
SHEET TITLE:

SPECIAL USE PERMIT (SUP) AREA - C

PROJ. MGR.: SS	PROJ. ENGR.: SC	DATE: 02/07/2020
DRAWN BY: BS	CHECKED BY: GB	SCALE: AS SHOWN

DRAWING NO.

SUP-202



1 AREA - D
1" = 500'

N

LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
- PERIMETER FENCE
- 50' SETBACK FROM PARCEL BOUNDARY
- GEN-TIE / COLLECTOR LINES
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SHEET TITLE:

SPECIAL USE PERMIT (SUP) AREA - D

PROJ. MGR.: SS	PROJ. ENGR.: SC	DATE: 02/07/2020
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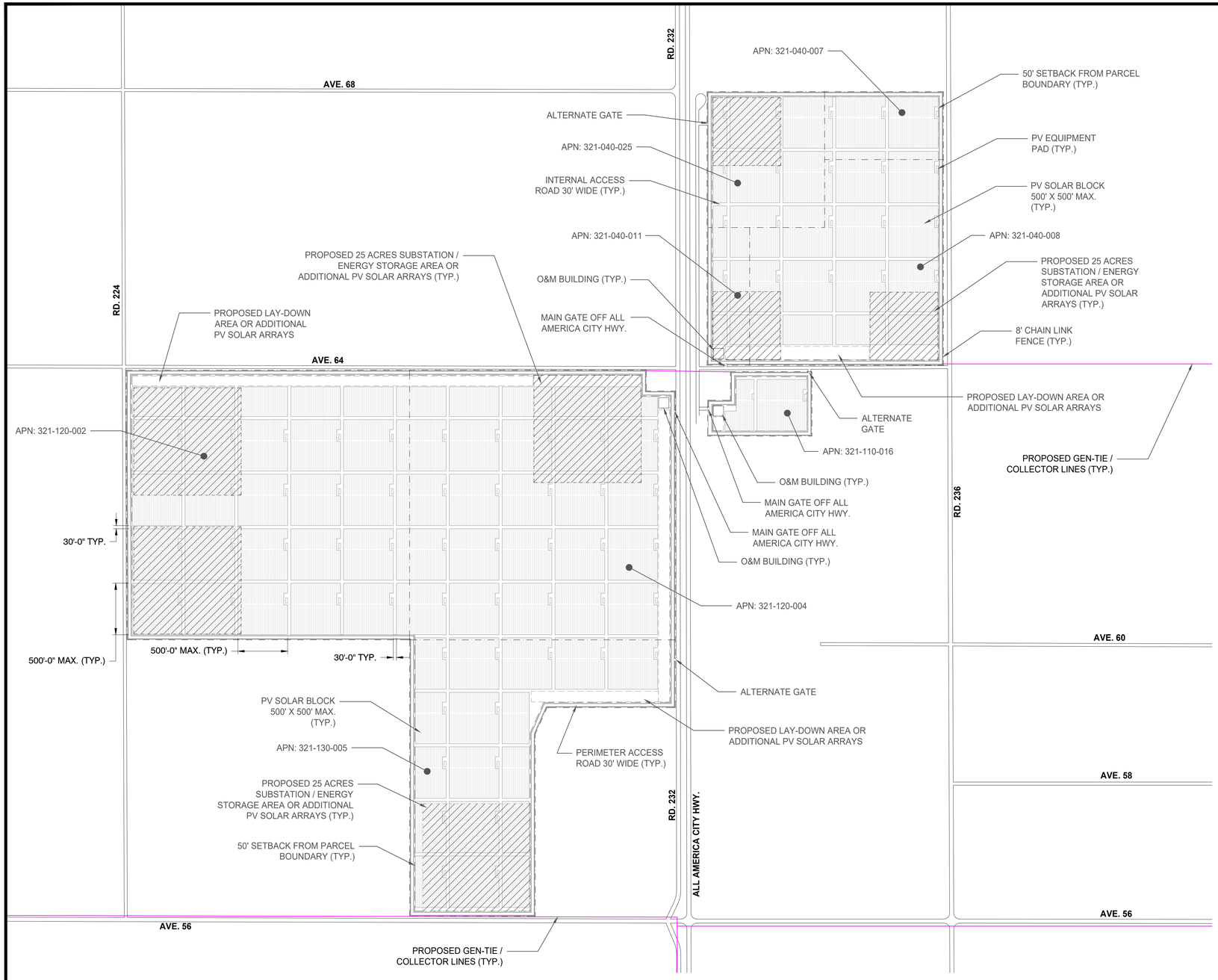
DRAWING NO.

SUP-203



1 AREA - E
1" = 500'

N

LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
- PERIMETER FENCE
- 50' SETBACK FROM PARCEL BOUNDARY
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- O&M BUILDING
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SPECIAL USE PERMIT (SUP) AREA - E

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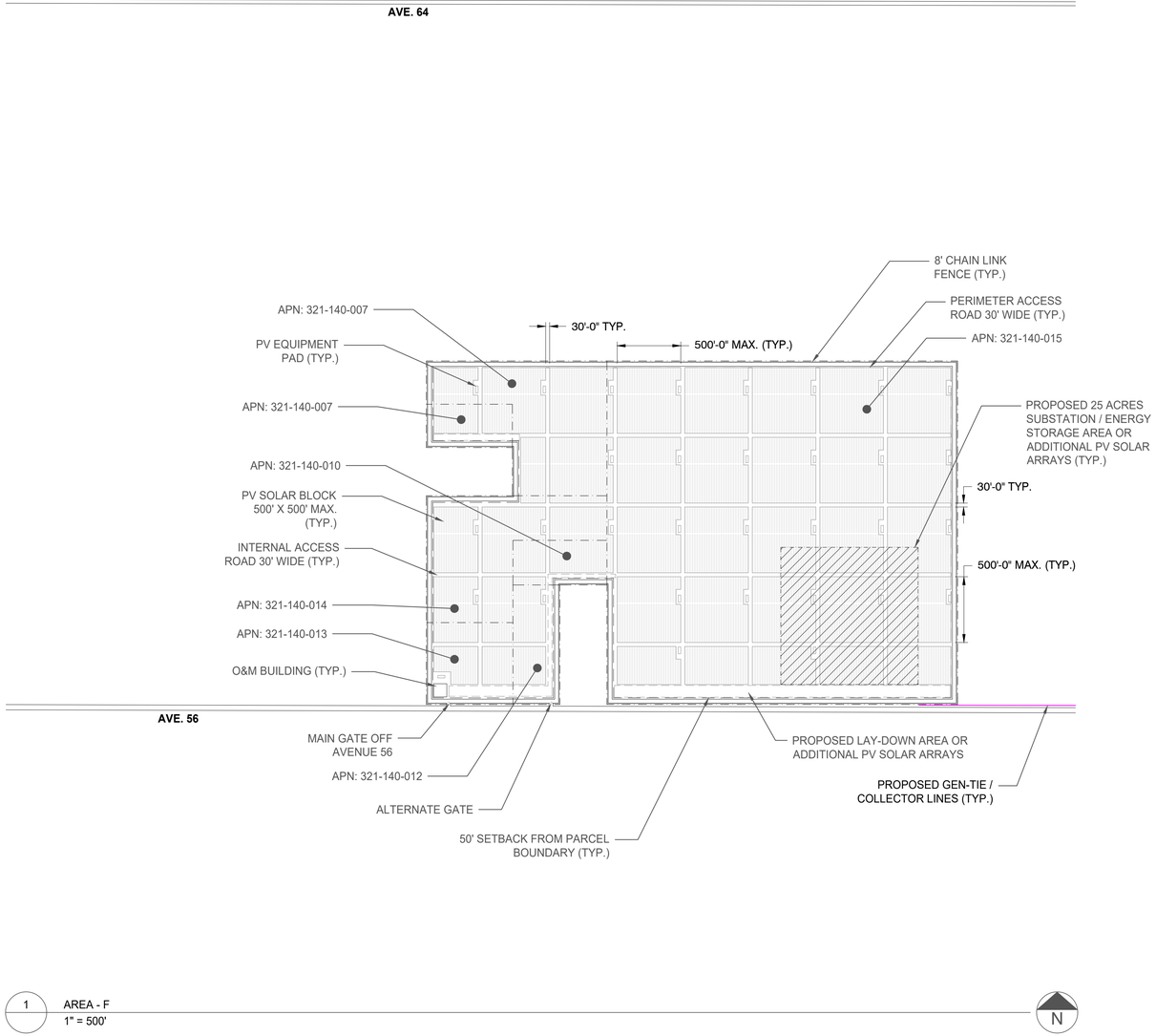
DRAWING NO.

SUP-204



1 AREA - F
1" = 500'

N

LEGENDS:

- PROJECT ACCESS ROAD
- PARCEL BOUNDARY
- PERIMETER FENCE
- 50' SETBACK FROM PARCEL BOUNDARY
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SHEET TITLE:

SPECIAL USE PERMIT (SUP) AREA - F

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DRAWING NO.

SUP-205