



CALIFORNIA PUBLIC UTILITIES COMMISSION

LS POWER GRID CALIFORNIA, LLC GATES 500KV DYNAMIC REACTIVE SUPPORT PROJECT

Draft Initial Study Mitigated Negative Declaration

April 2022



A.21-02-018

State Clearinghouse No. TBD

Prepared for:
California Public Utilities Commission

Prepared by:
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List of Acronyms

Alternating current	AC
Applicant Proposed Measures	APM
Assessor Parcel Number	APN
Best management practices	BMPs
California Code of Regulations	CCR
California Department of Forestry and Fire Protection	CAL FIRE
California Environmental Quality Act	CEQA
California Independent System Operator Corporation	CAISO
Critical Infrastructure Program	CIP
California Public Resources Code	PRC
California Public Utilities Commission	CPUC

Cubic Yards	CY
Department of Water Quality	DWQ
Direct Current	DC
Environmental Field Specialist	EFS
Federal Energy Regulation Commission	FERC
Gas insulated bus	GIB
Greenhouse gas	GHG
Hazardous Materials Communication Plan	HAZCOM
Hazardous Materials Management Plan	HMMP
Heating Ventilation and Air Cooling	HVAC
Interstate	I
Insulated gas bipolar transistor	IGBT
Kilovolt	kV
Light-emitting diode	LED
Local Area Network	LAN
Long Term Evolution	LTE
LS Power Grid California, LLC	LSPGC
Mega-watts	MW
Million volt-amperes (reactive)	MVAR
National Electrical Code	NEC
National Electric Safety Code	NESC
National Pollutant Discharge Elimination System	NPDES
North American Electric Reliability Corporation	NERC
NOx	Nitrogen Oxide
Occupational Safety and Health Administration	OSHA
Operation and maintenance	O&M
Pacific Gas and Electric Company	PG&E
Particulate matter	PM
Permit to Construct	PTC
Point of Change in Ownership	POCO
Polyvinyl chloride	PVC
Public Land Survey System	PLSS
Right-of-way	ROW
Safety Data Sheets	SDS
San Joaquin Valley Air Pollution Control District	SJVAPD
Spill Prevention, Control, and Countermeasure	SPCC
State Route	SR
Static Synchronous Compensator	STATCOM
State Water Resources Control Board	SWRCB
Storm Water Pollution Prevention Program	SWPPP
Supervisory Control and Data Acquisition	SCADA
Underground Service Alert	USA
Vehicle miles traveled	VMT
Wide Area Network	WAN
Yard	Yd

EXECUTIVE SUMMARY

ES.1 Introduction

On February 19, 2021, LS Power Grid California, LLC (LSPGC or the Applicant) submitted a Permit to Construct (PTC) Application (A.21-02-018) to the California Public Utilities Commission (CPUC) for the Gates 500kV Dynamic Reactive Support Project (Project). The Applicant proposes to construct and operate the Orchard Substation and connect to the existing PG&E Gates Substation, pursuant to CPUC General Order (GO) 131-D. Interconnections and upgrades the existing PG&E Gates Substation are also considered part of the Project. The PTC Application includes the Proponent's Environmental Assessment (PEA) prepared pursuant to Rule 2.4 of the CPUC's Rules of Practice and Procedure.

The Project is subject to the California Environmental Quality Act (CEQA) review. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines, and CPUC General Order (GO) 131-D, the CPUC prepared an initial study and Mitigated Negative Declaration (IS/MND) to evaluate potential environmental impacts of the Project and identify mitigation measures to reduce potentially significant impacts. Based on the analysis in the IS and the substantial evidence supporting the analysis, it has been determined that all significant environmental impacts of the Project would be avoided or reduced to below the level of significance with the incorporation of feasible mitigation measures agreed to by the Applicant. For this reason, adoption of an IS/MND satisfies the requirements of CEQA.

The Project for the purpose of this CEQA analysis includes both the Orchard Substation Facilities, and the PG&E Interconnection Facilities described in this section. The Project was identified by the California Independent System Operator Corporation (CAISO) to ensure the reliability of the CAISO controlled grid. The CPUC will use the information in this CEQA document to inform their decision whether or not to approve the LSPGC application to construct and operate the Orchard Substation only. The construction and operation of the PG&E Interconnection Facilities, although analyzed in this CEQA document, are not considered part of the CPUC's LSPGC application decision.

ES.2 Project Description

The Project is comprised of construction, operation, and decommissioning of the proposed new Orchard Substation on an approximately 20-acre undeveloped site located in Fresno County, California, approximately 1 mile northwest of the intersection of South Lassen Avenue (State Route [SR] 269) and West Jayne Avenue, approximately 3.3 miles southwest of the city of

Huron. The Project includes two major components; the LSPGC Orchard Substation Facilities and the PG&E Interconnection Facilities. The Orchard Substation includes two STATCOM units and ancillary components, located immediately north of the PG&E Gates Substation within the proposed Orchard Substation site. Construction of this substation would permanently disturb 9.8 acres of the 20-acre site.

The proposed Orchard Substation comprises the following components:

- Lightning Shielding Masts;
- Two 500 kV Circuit Breakers;
- 500 kV Bussing;
- 500 kV Group Operated Disconnect Switches;
- 500 kV Surge Arresters;
- 500 kV Potential Transformers;
- Two 500 kV Take-Off Towers;
- Three 3-Phase 500 kV Main Power Transformers (comprising two main transformers and one installed spare that would likely be rotated into service within the first 10 years of operation);
- Outdoor Heating Ventilation and Air Conditioning (HVAC) Equipment and insulated gas bipolar transistor (IGBT)/Convertor Cooling Equipment;
- Outdoor Air Core Reactors;
- Outdoor Medium Voltage Bussing;
- Outdoor Medium Voltage Instrument/Auxiliary Transformers;
- Outdoor Medium Voltage Surge Arresters; and
- Outdoor Medium Voltage Group Operated Disconnect Switches.

In addition, the two approximately 4,000 square-foot STATCOM IGBT Valve/Control Enclosures (painted ANSI 7- light grey) would contain the following equipment:

- IGBT Converters;
- Protective Relaying and Control Equipment;
- Supervisory Control and Data Acquisition (SCADA) Equipment;
- Cooling equipment;
- AC/DC Auxiliary Power Equipment; and
- Spare Parts and Maintenance Tool Storage.

PG&E's Gates Substation would be modified and interconnection facilities would be constructed to provide the connection for operation of the Orchard Substation. (PG&E would install two 500 kV high-voltage circuit breakers (HVCBs) in breaker-and-a-half (BAAH) positions within the PG&E Gates Substation. Also, within the Gates Substation PG&E would reassign transformer

bank 12's 500 kV BAAH breaker connection using a Gas-Insulated Bus (GIB) and would add a new bus position at Bay #1 and Bay #2, one for each STATCOM unit. New line protective relaying, automation, and telecommunications equipment would be installed inside the 500 kV control building within the PG&E Gates Substation.

PG&E would also install two 500 kV transmission line circuits from the PG&E Gates Substation to the Orchard Substation. The two new circuits would be installed between each of Bay #1 and Bay #2 of the PG&E Gates Substation 500 kV yard and the future transition station structures on PG&E property (for a total of approximately 3,500 feet of 500kV circuit). Overhead to underground transition stations with disconnect switches are proposed to avoid impacting existing overhead transmission lines. PG&E would also install redundant underground fiberoptic cable paths in separate trenches between the Orchard and Gates substations. Additional details are provided in Chapter 2, *Project Description*.

ES.3 Environmental Determination

This IS/MND has been prepared to identify the potential environmental effects resulting from implementation of the Project, evaluate the level of significance of these effects, and identify the revisions in the Project (i.e., mitigations) that would avoid the effects or reduce them below established thresholds of significance. This IS/MND relies on information from LSPGC's Application for a PTC, the accompanying PEA, Project site reconnaissance, LSPGC and PG&E's responses to data requests by the CPUC, and the environmental expertise of the CPUC's consultant, who has prepared this IS/MND.

In its PEA, LSPGC identified a number of Applicant Proposed Measures (APMs) intended to avoid or reduce potential impacts associated with the Project. In some instances, those APMs have been superseded by CPUC-recommended mitigation measures, as described in this IS/MND. Those APMs that have not been superseded are considered part of the Project for the purpose of this IS/MND and, upon adoption of the Final MND, would become part of the Mitigation Monitoring, Compliance, and Reporting Program to assure that implementation of and compliance with the measures would be monitored and enforced by the CPUC. PG&E has also proposed Avoidance and Minimization Measures (AMMs) and Best Management Practices (BMPs) to reduce effects associated with the PG&E Interconnection Facilities. Based on the analysis documented in this IS/MND, in addition to implementation of APMs, AMMs, BMPs, and mitigation measures are recommended for the following resource areas, to reduce potentially significant impacts of the Project to a less-than-significant level:

- Biological Resources
- Geology, Soils, and Paleontology

The mitigation measures either supplement or supersede the APMs proposed by the Applicant or PG&E construction measures. LSPGC has agreed to implement all of the recommended mitigation measures as part of the Project. Upon adoption of the Final MND, the recommended mitigation measures would become part of the Project Mitigation Monitoring, Compliance, and Reporting Program.

Environmental impacts, applicable APMs, and mitigation measures for the Project are provided in Chapter 3 of this IS/MND. **Table ES-1** at the end of this Executive Summary identifies the potentially significant environmental impacts of the Project and applicable APMs and recommended mitigation measures that reduce those impacts to a less-than-significant level. The draft Mitigation Monitoring, Compliance, and Reporting Program included in Chapter 5 of this IS/MND will be updated if needed to reflect the CPUC’s decision on the Project, including any revisions to the mitigation measures that must be implemented if the Project is approved.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Aesthetics	APM AE-1: All Orchard Substation Facilities sites would be maintained in a clean and orderly state. Construction staging areas would be sited away from public view where possible. Nighttime lighting would be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, project staging and temporary work areas would be returned to pre-project conditions, including re-grading of the site and re-vegetation or re-paving of disturbed areas to match pre-existing contours and conditions.	Less than significant
Aesthetics	APM AE-2: Structures and equipment at the proposed Orchard Substation would be a non-reflective finish and neutral gray color.	Less than significant
Agriculture	APM AGR-1: Prior to commencing construction of the Orchard Substation Facilities, LSPGC must ensure that the Williamson Act contract for the 20-acre portion of the Project site impacted by the Project is: <ul style="list-style-type: none"> • Cancelled pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 5 of the California Government Code; • Determined by Fresno County to be consistent with the Proposed Project; or Nullified via eminent domain or purchase in lieu of eminent domain pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 6 of the California Government Code. 	Less than significant.
Air Quality	APM AQ-1: The Orchard Substation Facilities portion of the Project would ensure that at least 32 percent of all diesel-powered equipment use (tracked as horse-power hours) during construction year 2022 is from equipment that meet USEPA-certified Tier 4 standards, the highest USEPA-certified tiered emission standards. Prior to the commencement of construction, LSPGC shall develop a diesel-powered equipment use hours tracking tool and procedure. The tracking tool shall be utilized by the Project to keep track of the certified engine tier and daily equipment use hours of all off-road diesel-powered equipment. If all diesel-powered equipment is certified Tier 4, the tracking tool would not be required; however, the Orchard Substation Facilities portion of the Project would be required to verify, record, and track the engine tier of all equipment. The tracking tool shall be maintained by the Project and tracking updates shall be submitted to the CPUC on a monthly basis to track the Project’s compliance. Records of the engine tier of all equipment shall be kept onsite and made available to the CPUC upon request.	Less than significant.
Air Quality	APM AQ-2: The Orchard Substation Facilities portion of the Project would comply with SJVAPCD Rule 8021 and would prepare and implement a Dust Control Plan for approval by the SJVAPCD Air Pollution Control Officer (APCO). The Dust Control Plan would include specific dust control measures as prescribed within Rule 8021, or as otherwise requested by the APCO. This plan would be submitted and approved prior to construction.	Less than significant.
Air Quality	APM AQ-3: The Orchard Substation portion of the Project would comply with AB 203 and provide Valley fever awareness training to all construction workers, inspectors, monitors, and any other project personnel that are required to perform work in or near disturbed soils or dust emissions at the Orchard Substation Facilities site. The Valley fever awareness training materials would be prepared by a qualified	Less than significant.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Air Quality (cont.)	professional, adapted from agency published trainings (CDPH, CDC, etc.), or otherwise produced by a qualified source. The Valley fever awareness training would be incorporated into the Project's overall Worker Environmental Awareness Program (WEAP) training.	Less than significant.
Air Quality	<p>BMP-6: Fugitive Dust General. Types work activities where water trucks or other dust abatement methods are typically required include: excavation, trenching, grading, sand blasting, and demolition. The crew shall not allow visible dust to pass beyond the project boundary. The crew shall abate dust by:</p> <ul style="list-style-type: none"> • Applying water to disturbed areas and to storage stockpiles; • Applying water in sufficient quantities to prevent dust plumes during activities such as clearing & grubbing, backfilling, trenching and other earth moving activities; • Limit vehicle speed to 15 miles per hour; • Load haul trucks with a freeboard (space between top of truck and load) of six inches or greater; • Cover the top of the haul truck load; • Clean-up track-out at least daily; and • The crew shall not generate dust in amounts that create a nuisance to wildlife or people, particularly where sensitive receptors such as schools and hospitals are located nearby or down-wind. <p>During inactive periods (e.g. after normal working hours, weekends, and holidays), the crew shall apply water or other approved material to form a visible crust on the soil and restrict vehicle access</p>	Less than significant.
Air Quality	BMP-7: San Joaquin Valley AQMD >1 acre of soil disturbing activities. A Construction Notification Form must be submitted to the San Joaquin Valley APCD by the Environmental Lead/Project EFS at least 48 hours prior to commencing any earth moving activities.	Less than significant
Biological Resources	APM BIO-1: Speed of vehicles driving along proposed access roads and on the Project site during construction and O&M would be limited to 15 mph. In addition, construction and maintenance employees would be advised that care should be exercised when commuting to and from the Proposed Project area to reduce accidents and animal road mortality.	Less than significant.
Biological Resources	APM BIO-2: Conductors and ground wires would be spaced sufficiently apart so that raptors cannot contact two conductors or one conductor and a ground wire causing electrocution (APLIC 2006), or raptor protection would be installed subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines.	
Biological Resources	APM BIO-3: Appropriate methods to reduce the risks of avian collisions would be incorporated into the Project's design (APLIC 2012), subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines	
Biological Resources	APM BIO-4: If feasible, the Applicant would avoid construction during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season, the Applicant would perform a survey in the area where the work is to occur. This survey would be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified, a suitable construction buffer would be implemented to ensure that the nesting or breeding activities are not substantially adversely affected. If the nesting or breeding activities are being conducted by a federal- or state-listed species, the Applicant would consult with the USFWS and CDFW as necessary. Monitoring of the nest would continue until the birds have fledged or construction is no longer occurring on the site. If an inactive nest is identified, careful nest removal under the supervision and direction of qualified biologists would occur wherever feasible.	Less than significant.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Biological Resources	APM BIO-5: If a raptor nest is observed during pre-construction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the Project are disturbing or disrupting nesting or breeding activities, the monitor would make recommendations to reduce noise or disturbance in the vicinity of the nest.	Less than significant.
Biological Resources	APM BIO-6: All excavated holes or trenches that are not be filled at the end of a workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife species.	
Biological Resources	APM BIO-7: The use of outdoor lighting during construction and O&M of the Orchard Substation would be minimized whenever practicable.	Less than significant.
Biological Resources	APM BIO-8: A WEAP would be implemented to educate all construction and O&M workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction or O&M activities.	
Biological Resources	AMM-1: Train employees and contractors in environmental regulations and guidelines to avoid or reduce effects on covered species.	Less than Significant
Biological Resources	AMM -2: Park vehicles and equipment on pavement, roads, or previously disturbed areas.	Less than Significant
Biological Resources	AMM-3: Minimize or avoid new disturbance to the extent practicable.	Less than significant.
Biological Resources	AMM-4: Do not exceed a speed limit of 15 mph on ROWs or unpaved roads within sensitive land cover types.	Less than significant.
Biological Resources	AMM-5: Do not dump trash, bring firearms or pets, or have open fires such as barbecues on worksites.	Less than significant.
Biological Resources	AMM-6: Do not refuel vehicles within 100 ft of a wetland or waterway unless a bermed and lined refueling area is constructed.	Less than significant.
Biological Resources	AMM-7: In areas of high risk of wildlife electrocution, use insulated jumper wires, animal guards for equipment insulator bushings, or construct lines to follow the Bird and Wildlife Protection Standards.	Less than significant.
Biological Resources	AMM-8: During fire season in SRAs, carry backpack water sprayers and shovels in all vehicles; during red flag conditions curtail welding, carry a large fire extinguisher on each fuel truck, and clear parking and storage areas of flammable materials.	Less than significant.
Biological Resources	AMM-9: Implement erosion control measures where necessary to reduce erosion and sedimentation in wetlands or waterways.	Less than significant.
Biological Resources	AMM-10: If more than 0.25 acre of grassland is disturbed, except in areas with vernal pools or covered plant species, restore to pre-existing conditions using a certified weed-free commercial seed mix.	Less than significant.
Biological Resources	AMM-11: If elderberry plants with one or more stems 1 inch at ground level are present, establish an exclusion zone of 20 ft. If impacts are unavoidable, follow additional measures in the VELB conservation plan and compliance brochure, which must be in all vehicles working within range of VELB.	Less than significant.
Biological Resources	AMM- 12: San Joaquin kit fox. If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided where possible. However, if dens are located within the proposed work area and cannot be avoided during construction, qualified biologists will determine if the dens are occupied. If unoccupied, the qualified biologist will remove these dens by hand excavating them in accordance with USFWS procedures (U.S. Fish and Wildlife Service 1999). Exclusion zones will	Less than significant.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Biological Resources (cont.)	be implemented following USFWS procedures (U.S. Fish and Wildlife Service 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be as follows: Potential Den—50 feet; Known Den—100 feet; Natal or Popping Den—to be determined on a case-by-case basis in coordination with USFWS and DFG. Pipes will be capped and exit ramps will also be installed in these areas to avoid direct mortality.	Less than significant.
Biological Resources	BMP-1: Nesting Birds. If work is anticipated to occur within the nesting bird season (February–September), nesting birds, including raptors and other species protected under the Migratory Bird Treaty Act, may be impacted. If active nests are discovered, exclusionary measures and or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. For nests discovered during construction, PG&E implements Work Procedure (WP) 2321 to identify and avoid impacts to nesting birds. WP 2321 generally requires assistance from the project biologist to determine if the construction action will impact the nest, and if so, identify whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E project biologist.	Less than significant.
Biological Resources	BMP-19: Bio Survey. A pre-activity survey (PAS) must be performed within 30 days of the construction start date to determine the presence of covered species. Results of the PAS will determine if any additional requirements, including monitoring and species specific AMMs, need to be implemented at these locations during construction. Any identified avoidance measures will be provided to construction crews. Avoidance measures must be adhered to during construction. Contact the PG&E project Biologist at least 30-days prior to start of any project activities, including mobilization and staging of equipment materials.	Less than significant.
Biological Resources	Mitigation Measure BIO-1: Protection of Kit Fox During Construction. Preconstruction surveys shall be conducted by a qualified biologist for the presence of San Joaquin kit fox within 14 days prior to commencement of construction activities pursuant to the USFWS (1999) <i>Standardized Recommendations for Protection of the San Joaquin Kit Fox</i> . The surveys shall be conducted in areas of suitable habitat for San Joaquin kit fox. Areas that have been disked or cultivated within 12 months prior to the start of ground-disturbing activities are not considered suitable. Surveys need not be conducted for all areas of suitable habitat at one time; they may be phased so that surveys occur within 14 days prior to disturbance within active portions of the site. If no potential San Joaquin kit fox dens are identified, no further mitigation is required. If potential kit fox dens are observed and avoidance is determined to be feasible (as defined in CEQA Guidelines §15364 consistent with the USFWS [1999] <i>Standardized Recommendations for Protection of the San Joaquin Kit Fox</i>) by a qualified biologist in consultation with the Project owner and the County, buffer distances shall be established prior to construction activities. If avoidance of the potential dens is not feasible, the following measures shall be implemented to avoid potential adverse effects to the San Joaquin kit fox: <ul style="list-style-type: none"> • If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent foxes from using them during construction. • If the qualified biologist determines that a potential non-natal kit fox den may be active, an on-site passive relocation program shall be implemented with prior approval from the USFWS. This program shall consist of excluding San Joaquin kit foxes from occupied burrows by installation of one-way doors at burrow entrances, monitoring of the burrow for 72 hours to confirm usage has been discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the qualified biologist determines that the San Joaquin kit foxes have stopped using active dens within the Project boundary, the dens shall be hand-excavated, as stated above for inactive dens. 	Less than significant.

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Cultural and Tribal Cultural Resources	<p>APM CUL-1 (Development and Implementation of a Worker Environmental Awareness Program): LSPGC would design and implement a Worker Environmental Awareness Program (WEAP) that would be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. The WEAP would be submitted and approved by the CPUC prior to construction. No construction worker would be involved in ground disturbing activities without having participated in the WEAP. The WEAP would include, at a minimum:</p> <ul style="list-style-type: none"> • Training on how to identify potential cultural resources and human remains during the construction process; • A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation; • A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project; • A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and LSPGC policies; and • A statement by the construction company or applicable employer agreeing to abide by the WEAP, LSPGC policies and other applicable laws and regulations. <p>The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist.</p>	Less than significant.
Cultural and Tribal Cultural Resources	<p>APM CUL-2 (Cultural Resources Inventory): If proposed facilities and ground-disturbing activities move outside the previously surveyed footprint, those areas would be subjected to a cultural resources inventory to ensure that any newly identified cultural resources are avoided by ground disturbing activities.</p>	Less than Significant
Cultural and Tribal Cultural Resources	<p>APM CUL-3 (Archaeological and Native American Monitoring): If subsurface prehistoric or ethnohistoric resources are encountered during construction, archaeological and Native American monitoring is recommended during all excavation associated with the Project. A qualified archaeologist and a member of the Dumna Wo-Wah Tribal Government shall be retained by LSPGC to monitor excavation associated with the Proposed Project to ensure that there is no impact to any significant unanticipated cultural resource. Prior to construction, LSPGC would consult with a designated representative of the Dumna Wo-Wah Tribal Government on the appropriate course of action to be taken should unanticipated cultural materials, and specifically human remains, be discovered during construction.</p>	Less than Significant
Cultural and Tribal Cultural Resources	<p>APM CUL-4 (Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources): In the event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 100 feet (30 meters) of the discovery would be halted and redirected to another location. LSPGC's qualified archaeologist would inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts would occur, the resource would be documented on State of California Department of Parks and Recreation cultural resource records and no further effort would be required. If the resource cannot be avoided and may be subject to further impact, LSPGC would evaluate the significance and CRHR eligibility of the resources and, in consultation with the CPUC, determine appropriate treatment measures. Preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, LSPGC's qualified archaeologist, in consultation with the CPUC and, if the unearthed resource is prehistoric or Native American in nature, the Native American monitor, shall develop additional treatment measures, such as data recovery consistent with CEQA Guidelines Sections 15126.4(b)(3)(C)-(D). Archaeological materials recovered during any investigation shall be curated at an accredited curation facility.</p>	Less than Significant

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Cultural and Tribal Cultural Resources	<p>APM CUL-5 (Unanticipated Discovery of Human Remains): Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy where feasible and otherwise managed pursuant to the standards of CEQA Guidelines Sections 15064.5(d) and (e). If human remains are discovered during construction or O&M activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner would contact the NAHC. The NAHC would then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects. No part of the Project is located on federal land.</p>	Less than Significant
Cultural and Tribal Cultural Resources	<p>BMP-17: Inadvertent Cultural Resource Discovery. If cultural resources are observed during ground-disturbing activities, the following procedures will be followed:</p> <ul style="list-style-type: none"> • Stop all ground disturbing work within 100 feet of the discovery location to avoid impacts. • Immediately notify a PG&E Cultural Resource Specialist who will assess the discovery. • Leave the site or the artifact untouched. • Record the location of the resource, the circumstances that led to discovery, and the condition of the resource. • Do not publicly reveal the location of the resource and ensure the location is secured. • If unsure about the significance or antiquity of a discovery, photograph the artifact or feature with a scale (e.g., coin, tape measure, etc.) and send to a PG&E Cultural Resource Specialist for review. <p>Comprehensive guidance on the protocol related to an inadvertent discovery of potentially significant cultural resources on a job site can be found in Utility Standard ENV-8005S or by consulting a PG&E Cultural Resource Specialist.</p>	Less than significant.
Cultural and Tribal Cultural Resources	<p>BMP-18 (Human Remains Protocol): Section 7050.5 of the California Health and Safety Code (CHSC) states that it is a misdemeanor to knowingly disturb a human burial. In keeping with the provisions provided in 7050.5 CHSC and Public Resource Code 5097.98, if human remains are encountered (or are suspected) during any project-related activity:</p> <ul style="list-style-type: none"> • Stop all work within 100 feet; • Immediately contact a PG&E Cultural Resource Specialist (CRS), who will notify the county coroner; • Secure location, but do not touch or remove remains and associated artifacts; • Do not remove associated spoils or pick through them; • Record the location and keep notes of all calls and events; and • Treat the find as confidential and do not publicly disclose the location. • Contact: • Upon discovery of cultural resources or suspected human remains, contact the following individual immediately: • CRS Name: [Contact to be provided prior to construction.] 	Less than significant.
Cultural and Tribal Cultural Resources	<p>BMP-20: Worker Awareness Training. Prior to the start of any ground-disturbing activity, PG&E's Cultural Resource Specialist (CRS) shall prepare archeological, historical and paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The CRS shall make the training materials available for review and comment by the Native American group that expressed interest in the project. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the</p>	Less than significant.

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Cultural and Tribal Cultural Resources (cont.)	CRS. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of resources that could be encountered within the Project site and the procedures to be followed if they are found. PG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, which documentation shall be made available upon request.	Less than significant.
Geology and Soils	<p>APM GEO-1: The following measures would be implemented during construction to minimize impacts from geological hazards and disturbance to soils:</p> <ul style="list-style-type: none"> • Keep vehicle and construction equipment within the limits of the Project and in approved construction work areas to reduce disturbance to topsoil; • Prior to grading, salvage topsoil to a depth of six inches or to actual depth if shallower (as identified in site-specific geotechnical investigation report) to avoid mixing of soil horizons; • Avoid construction in areas with saturated soils, whenever practical, to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure; • Keep topsoil material on-site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporary disturbed areas. Temporary disturbance areas would be re-contoured following construction to match pre-construction grades. Areas would be allowed to re-vegetate naturally or would be reseeded with a native seed mix from a local source if necessary. On-site material storage would be sited and managed in accordance with all required permits and approvals; and <p>Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Removed vegetation would be disposed of off-site to an appropriate licensed facility or can be chipped on-site to be used as mulch during restoration.</p>	Less than significant.
Geology and Soils	APM GEO-2: The structural requirements of the CBC are applicable to certain structural components of the Project, including the control enclosures. LSPGC and/or its contractors would design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Supplemental Geotechnical Engineering Report to be prepared and submitted to the CPUC upon completion.	Less than significant.
Geology and Soils	BMP-2: Generation of Spoil - Substation. All spoils generated from within PG&E substations require sampling and shall only be disposed of PG&E approved landfills listed in ERTC Attachment Guide, Section 4, Part 1: ENV-4000P-01-JA15 'Job Aid-PG&E Authorized Disposal & Recycling Facilities'. Spoils from within substations are prohibited from give-away. Copies of all manifests are required to be submitted to the Environmental Lead/Project Environmental Field Specialist (EFS).	Less than significant.
Geology and Soils	BMP-3: Addendum to the Geotechnical Investigation Report. Prior to final design and construction of the PG&E Interconnection Facilities, PG&E would prepare an addendum to the Geotechnical Investigation Report prepared by Kleinfelder, 2015. The addendum would acknowledge and describe Segments GV13 and GV14 of the Great Valley Fault System, and verify that the project design is sufficient to withstand movement and the associated shaking that could occur on the two fault segments.	Less than significant.
Geology and Soils	Mitigation Measure GEO-1: Fault Study. In order to account for any effects related to strong seismic ground shaking due to the presence of the Great Valley thrust fault system, the required supplemental geotechnical report for the Orchard Substation Facilities shall account for the presence of the Great Valley thrust fault system. Report shall be prepared by a qualified geotechnical engineer licensed by the State of California. The report shall include an analysis of the presence of the Great Valley thrust fault system and how its proximity to the Project would inform the seismic design of the Project components.	Less than significant.

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Paleontology	<p>APM PALEO-1: In the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), earthwork within the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.</p>	Less than significant.
Paleontology	<p>APM PALEO-2: Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository (e.g., the SDNHM, the University of California Museum of Paleontology) along with associated field notes, photographs, and compiled fossil locality data. Donation of the fossils should be accompanied by financial support for initial specimen curation and storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.</p>	Less than significant.
Paleontology	<p>BMP-21: Inadvertent Paleontological Resource Discovery. In the event that a paleontological resource is discovered during ground-disturbing activities, the foreman will temporarily divert the construction equipment around the find until it is assessed for scientific significance. A buffer of at least 50 feet around the discovery will be maintained for safety. The foreman will report the discovery to the site Supervisor and the PG&E point of contact given on the training brochure so that appropriate notifications can be issued. A temporary construction exclusion zone, consisting of lath and flagging tape in a 50-foot radius, will be erected around the discovery. Following fossil collection, the temporary construction exclusion zone will be removed and, once a professional paleontologist has assessed the situation, he/she will notify the site supervisor that construction activities may resume in the area of the find.</p>	Less than significant.
Paleontology	<p>BMP-22: Paleontological Resource Monitoring, Salvage, and Treatment Protocols. In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP 21) shall be followed; if significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review before continuing construction activities in the area of the find or as otherwise directed by the qualified paleontologist. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.</p> <ul style="list-style-type: none"> • The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010). • The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. 	Less than significant.

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Paleontology (cont.)	<ul style="list-style-type: none"> • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion. <p>The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment.</p>	Less than significant.
Paleontology	<p>Mitigation Measure GEO-2: Worker Awareness Training and Monitoring Protocols: Prior to the start of any ground-disturbing activity, the project owner shall retain a qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) to prepare paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the qualified paleontologist. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found. The project owner and/or their contractors shall retain Documentation demonstrating that all construction personnel attended the training prior to the start of work on the site and shall provide the documentation to the CPUC Project Manager upon request</p>	Less than significant.
Paleontology	<p>Mitigation Measure GEO-3: Paleontological Resource Monitoring, Salvage, and Treatment Protocols: In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP 21) shall be followed; if significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review and approval before continuing construction activities in the area of the find. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.</p> <ul style="list-style-type: none"> • The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010). • The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in 	Less than significant.

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Paleontology (cont.)	<p>a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.</p> <ul style="list-style-type: none"> • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion. • The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment. 	Less than significant.
Greenhouse Gas Emissions	<p>APM GHG-1: The following measures shall be implemented to minimize greenhouse gas emissions from all construction sites:</p> <ul style="list-style-type: none"> • If suitable park-and-ride facilities are available in the Project vicinity, construction workers shall be encouraged to carpool to the job site. • Demolition debris shall be recycled for reuse to the extent feasible. • The contractor shall use line power instead of diesel generators at all construction sites where line power is available. <p>The contractor shall maintain construction equipment per manufacturing specifications.</p>	Less than significant.
Hazards and Hazardous Materials	<p>APM HAZ-1: A site-specific Spill Prevention, Control, and Countermeasure Plan (SPCCP) would be prepared prior to the initiation of construction. In the event of an accidental spill, the Project would be equipped with secondary containment that meets SPCCP Guidelines. The secondary containment would be sufficiently sized to accommodate accidental spills.</p>	Less than significant.
Hazards and Hazardous Materials	<p>APM HAZ-2: A Hazardous Materials Management Plan (HMMP) would be prepared and implemented for the Project. The plan would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan would include the following information related to hazardous materials and waste, as applicable:</p> <ul style="list-style-type: none"> • A list of hazardous materials present on-site during construction and O&M to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements; • A Hazardous Materials Communication (i.e., HAZCOM) Plan; • Assignments and responsibilities of Project health and safety roles; • Standards for any secondary containment and countermeasures required for hazardous materials; • Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Project area, and disposal protocols; and • Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA trained individual and testing at a certified laboratory. <p>The Project would also be equipped with lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment would be constructed around and under the battery racks, and the HMMP would address containment from a battery leak.</p> <p>The plan would be provided to the CPUC prior to construction for recordkeeping. Plan updates would be made and submitted as needed if construction activities change whereas the existing plan does not adequately address the Project.</p>	Less than significant.

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Hazards and Hazardous Materials	<p>APM HAZ-3: In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested, and if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.</p>	Less than significant.
Hazards and Hazardous Materials	<p>APM HAZ-4: LSPGC shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. Although the Project area is not located within an area designated as a Very High or High Fire Hazard Severity Zone, LSPGC will prepare a Construction Fire Prevention Plan prior to construction.</p> <p>All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.</p> <p>Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks, fire extinguishers, and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.</p>	Less than significant.
Hazards and Hazardous Materials	<p>BMP-4: Asbestos. If any loadbearing structure (poles, towers, concrete pads, etc.) is to be removed, this Project will require asbestos testing and notification to the local Air District or California Air Resource Board (CARB). Notify the Environmental Field Specialist (EFS) at least 45 calendar days prior to work commencing. The Air District must be notified at least 10 working days prior to work (demolition) commencing, some districts require 14 days. If the construction start date changes, notify the EFS immediately as notification to the Air District may need to be resubmitted. EFS is responsible for obtaining any necessary permits from the air district prior to start of work.</p>	Less than significant.

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Hazards and Hazardous Materials	<p>BMP-5: Combustion Sources. If project or work involves the installation of a combustion source that may require a local air district permit, please work with the EFS and Air SME to evaluate compliance requirements. Combustion sources, depending on HP or MMBtu rating may require an Authority to Construct Permit prior to any installation activities and a Permit to Operate prior to operating.</p> <p>Typical Combustion Sources that require permits are:</p> <ul style="list-style-type: none"> • Engines ≤50 HP; • Boilers/Heaters that combust natural gas; and • Flares 	Less than significant.
Hazards and Hazardous Materials	<p>BMP-8: Hazardous Materials Business Plan: The Environmental Field Specialist (EFS) shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are: 200 cubic feet of compressed gases (1000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 pounds of solids, or 55 gallons of liquids for more than 30 non-consecutive days. The following jurisdictions require notification for any amount of hazardous material/waste:</p> <p>Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only) Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details).</p> <p>NOTE: The Project EFS will develop an HMBP if it is required.</p>	Less than significant.
Hazards and Hazardous Materials	<p>BMP-9: Hazardous Waste Management Hazardous Materials Storage: This project may involve the storage of hazardous materials and they must be managed according to regulations and best management practices.</p> <ul style="list-style-type: none"> • All releases of hazardous materials must be immediately addressed. Maintain a spill kit onsite during the length of the project. Contact the project EFS for spills of hazardous materials/wastes to determine if agency notifications will be required and/or if additional resources are needed. • Hazardous materials, greater than 440 lbs and less than 1001 lbs can be transported on PG&E vehicles if the proper MOT shipping paper/MSDS accompanies the load. Contact the project EFS for additional guidance in these areas. • All hazardous materials containers must be marked correctly. • All hazardous materials signs must be displayed as required. • Non saturated oily rags (to be laundered) stored in non-combustible containers. • Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. on-site. • Hazardous material containers must be in good condition. • All hazardous materials must be compatible with containers. • Hazardous materials containers are kept closed. <p>If there is an unauthorized release of hazardous material, contact your Environmental Field Specialist immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043.</p>	Less than significant.
Hazards and Hazardous Materials	<p>BMP-10: Sulfur Hexafluoride (SF6) Gas Material/Waste Management. Before accessing any equipment that may contain SF6 gas byproduct waste, contact your local Environmental Field Specialist (EFS) at least two weeks in advance for assistance in arranging cleanup, transportation and disposal. PSC will retrieve, package, label and transport SF6 byproducts. All SF6 waste that is removed from a Substation must have proper shipping papers which could include a remote waste shipping paper or a manifest (manifests require a temporary EPA ID number).</p> <ul style="list-style-type: none"> • Substation personnel shall contact PSC to retrieve, package, label, and transport SF6 byproduct waste (i.e. fluorides of sulfur, metallic fluorides, etc.). All SF6 byproduct waste that is removed must have proper shipping papers, which could 	Less than significant.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Hazards and Hazardous Materials (cont.)	<p>include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA ID number).</p> <ul style="list-style-type: none"> • SF6 cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001. <p>Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF6 in all facilities. ASG provides 24-hour service in response to events involving SF6 as well as delivery and removal of all SF6 cylinders. Contact information: https://www.advancedspecialtygases.com.</p>	Less than significant.
Hazards and Hazardous Materials/ Water Quality	<p>BMP-11: SPCC: The local/support EFS shall be notified 30 days prior to an SPCC triggering event occurs (modification to existing or new storage of >1,320 gallons of oil in containers >55 gallons). If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by an engineer. The SPCC containment must be installed prior to moving onsite of quantities requiring containment. The PM number must remain open until the local/support EFS notifies you that the plan is certified by an engineer, and any necessary modifications are complete.</p>	Less than significant.
Hazards and Hazardous Materials	<p>BMP-12: Treated Wood: All new and used treated wood poles shall be managed in accordance with ENV-3000P-07 and stored on horizontal non-treated wood, concrete, or metal support beams raised off the ground to prevent decay and damage. As with any hazardous material, store treated wood away from storm drains.</p>	Less than significant.
Hazards and Hazardous Materials	<p>BMP-13: Treated Wood Waste: All treated wood waste and debris (e.g., poles, cross-arms, saw dust, chips, etc.) shall be transported to the local PG&E or PG&E Contractor approved collection point and placed in designated bins. No poles may be left in place, unless formal authorization is obtained from applicable State and/or Federal agencies or a liability waiver is signed. Please refer to Job Aid ENV-4000P-07.</p>	Less than significant.
Hydrology and Water Quality	<p>BMP-14: Stormwater Measures: The Project EFS [Environmental Field Specialist] will provide the Stormwater Group with the following upon completion of the PER: Stormwater Needs Request Form, Soil Disturbance Calculation Spreadsheet, and a KMZ file showing the proposed work area. These documents shall be sent by the Project EFS, via email, to: stormwater@pge.com (if applicable).</p>	Less than significant.
Hydrology and Water Quality	<p>BMP-15: Stormwater Management A-ESCPs: Standard PG&E good housekeeping and stockpile management measures shall be implemented.</p>	Less than significant.
Hydrology and Water Quality	<p>BMP-16: Small Excavation: Construction Dewatering: Dewatering of trenches or excavations may be required. The Environmental Lead/Project EFS shall be notified at least 30 days in advance to ensure the appropriate dewatering methods are used, proper notifications are made, and, if necessary, applicable authorizations/permits are obtained. All dewatering activities must be coordinated through the Environmental Lead/Project EFS throughout the duration of the project.</p>	Less than significant.
Hydrology and Water Quality	<p>APM WQ-1: Because the Project involves more than an acre of soil disturbance, a SWPPP would be prepared as required by the state NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs. Implementation of the plan would help stabilize disturbed areas and would reduce erosion and sedimentation. The SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:</p> <ul style="list-style-type: none"> • Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas; • Strictly controlling vehicular traffic; • Implementing a dust-control program during construction; • Restricting access to sensitive areas; 	Less than significant.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Hydrology and Water Quality (cont.)	<ul style="list-style-type: none"> • Using vehicle mats in wet areas; or • Revegetating disturbed areas, where applicable, following construction. <p>In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized</p>	Less than significant
Hydrology and Water Quality	<p>APM WQ-2: Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following:</p> <ul style="list-style-type: none"> • Recovered groundwater would be contained on site and tested prior to discharge; • If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing); • Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains; • Water unsuitable for land application would be disposed of at an appropriately permitted facility; and • Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE [U.S. Army Corps of Engineers], RWQCB, and/or CDFW [California Department of Fish and Wildlife], as applicable). 	Less than significant
Public Services	<p>APM PS-1: LSPGC would coordinate construction activities with local law enforcement and fire protection agencies. Emergency service providers would be notified of the timing, location, and duration of construction activities.</p>	Less than significant
Transportation	<p>APM TRA-1: LSPGC would prepare a Traffic Control Plan to describe measures to be taken to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LSPGC would follow its standard safety practices as needed, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LSPGC would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for obtaining a local encroachment permit, LSPGC would establish a Traffic Management Plan (TMP) to address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Construction activities would be coordinated with local law enforcement and fire protection agencies. Emergency service providers would be notified as required by the local permit of the timing, location, and duration of construction activities.</p>	Less than significant
Utilities	<p>APM UTIL-1: The Applicant shall notify all utility companies with utilities located within or crossing the Orchard Substation Facilities' Rights-of-Way (ROW) to locate and mark existing underground utilities along the entire length of the Orchard Substation Facilities at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid</p>	Less than significant.

TABLE ES-1
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF
APPLICANT PROPOSED MEASURES, PG&E CONSTRUCTION MEASURES AND MITIGATION MEASURES

Resource Area	Applicant Proposed Measures (APMs) PG&E Construction Measures Avoidance Minimization Measures (AMMs) and Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Significance with Measures Implemented
Utilities (cont.)	other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.	Less than significant

Required Approvals

The CPUC is the lead state agency for the Project under CEQA because a PTC is required in accordance with Section III.B of CPUC General Order 131-D. General Order 131-D contains the permitting requirements for the construction of transmission and power line facilities. In addition to the PTC, the Applicant would obtain all applicable permits for the Project from federal, state, and local agencies. **Table ES-2** provides the potential permits and approvals that may be required for Project construction.

TABLE ES-2
ANTICIPATED PERMIT, APPROVAL, AND CONSULTATION REQUIREMENTS

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
State Agencies		
National Pollutant Discharge Elimination System Permit (NPDES) Construction General Permit	Central Valley Regional Water Quality Control Board (RWQCB)	Stormwater discharges associated with construction activities disturbing more than 1 acre of land.
Permit to Construct (PTC)	California Public Utilities Commission (CPUC)	Overall project approval authority and CEQA review pursuant to General Order 131-D.
Local/Regional Agencies		
Encroachment and Traffic Control Permit	Fresno County	Construction within the public right-of-way, specifically within West Jayne Avenue.
Building and Grading Permits (non-discretionary)	Fresno County	Construction of the control enclosure (building permit) and grading/fill for STATCOM substation pad (grading permit).
Subdivision Map Act	Fresno County	Authorization to subdivide private property.
Williamson Act Review	Fresno County	Construction of project on land subject to a Williamson Act contract.
Rule 8021, Dust Control Plan	San Joaquin Valley Air Pollution Control District (SJVAPD)	Construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site.
Rule 9510, Indirect Source Review	SJVAPCD	Projects exceeding listed square footage thresholds (or 2 tons nitrogen oxides or respirable particulate matter) to submit air impact assessment applications when applying for a final discretionary approval from a public agency.


SOURCE: LSPGC, 2021a.

Environmental Determination

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Based upon an Initial Study, it is determined that the proposed Project WOULD NOT HAVE a significant effect on the environment with the incorporation of the Applicant Proposed Measures and mitigation measures (attached). The Initial Study is available for review at the CPUC, 505 Van Ness Avenue, San Francisco, California 94102.



 Boris Sanchez
 Project Manager
 California Public Utilities Commission

4/19/22

 Date

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CHAPTER 1

Introduction

On February 19, 2021, LS Power Grid, California, LLC (LSPGC or the Applicant) submitted a Permit to Construct (PTC) application (A.21-02-018) for the Gates 500kV Dynamic Reactive Support Project (Project). The California Public Utilities Commission (CPUC) Energy Division determined the PTC application to be complete on March 25, 2021. LSPGC proposes to construct and operate the Orchard Substation, consisting of a +/- 848¹ million volt-amperes, reactive (MVAR) dynamic reactive device to be installed in a minimum of two, equally sized Static Synchronous Compensator² (STATCOM) units and ancillary components. The Orchard Substation would be independently connected to the existing Pacific Gas and Electric Company (PG&E) Gates Substation via two new 300-foot-long single-circuit 500-kilovolt (kV) transmission lines as described in further detail in Chapter 2, *Project Description*.

The Project, for the purpose of this CEQA analysis, includes both the Orchard Substation Facilities proposed by LSPGC, and the PG&E Interconnection Facilities. The Project was identified by the California Independent System Operator Corporation (CAISO) to ensure the reliability of the CAISO controlled grid. The CPUC will use the information in this CEQA document to inform their decision whether or not to approve the LSPGC application to construct and operate the Orchard Substation only. The construction and operation of the PG&E Interconnection Facilities, although analyzed in this CEQA document, are not considered part of the CPUC's LSPGC application decision.

1.1 CEQA Process

Pursuant to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines, and CPUC General Order (GO) 131-D, the CPUC prepared an initial study and Mitigated Negative Declaration (IS/MND) to evaluate potential environmental impacts of the Project and identify mitigation measures to reduce potentially significant impacts.

A mitigated negative declaration (MND) may be prepared when “the initial study (IS) has identified potentially significant effects on the environment, but: (1) revisions in the project plans or proposals made by, or agreed to by, the applicant would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment” (Public Resources Code

¹ The designation “±” indicates both leading (capacitive) and lagging (inductive) reactive power.

² A STATCOM device provides or absorbs reactive current to regulate voltage on electricity transmission networks.

Section 21064.5). The CPUC has determined, based on the results of the IS, that the appropriate type of CEQA documentation for this Project is an MND.

This IS/MND identifies the potential environmental effects of the Project, evaluates their level of significance, and identifies the revisions in the Project agreed to by LSPGC and PG&E that would avoid or, through implementation of mitigation measures, reduce effects of the Project to a level below the level of significance. Specifics of the Project described and analyzed in this Draft IS/MND are based on LSPGC's Application for a PCT, the PEA (LSPGC, 2021a), and responses to CPUC data requests (LSPGC, 2021b and c; PG&E, 2020 and 2021a and b). This information is intended to describe construction, operations, and maintenance requirements and activities to inform an analysis of the Project's environmental effects using the CEQA Guidelines Appendix G checklist questions.

1.2 Public Review Process

On April 22, 2022, the CPUC filed a notice of completion (NOC) with the Governor's Office of Planning and Research, State Clearinghouse; published a notice of intent (NOI) to adopt an MND, and released this Draft IS/MND for a 30-day public and agency review period. The Draft IS/MND was distributed to federal, state, and local agency representatives, and the NOI was distributed to property owners within 1,000 feet of the Project and to other interested organizations and individuals, as outlined in **Appendix A** of this Draft IS/MND. Legal notice will appear on April 22, 2022, and April 29, 2022 in the Fresno Business Journal announcing the availability of the Draft IS/MND for public review in compliance with CEQA.

On April 22, 2022, the CPUC mailed a notice to relevant agencies, organizations, and individuals residing in the Project area, announcing that the Draft IS/MND was available for public review (recipients are identified in Appendix A). The CPUC established a Project website, <https://ia.cpuc.ca.gov/environment/info/esa/gates/index.html>, to provide Project and CEQA process information including the IS/MND, estimated schedule, public comment period, and other Project information. Additionally, there is a Project voice mail phone number, (707) 796-7002; and email address, lspgates@esassoc.com; to enable the public to ask questions of the CPUC CEQA team and provide comments on the Draft IS/MND.

The CPUC is accepting input on this Draft IS/MND from stakeholder agencies, the public, and other interested parties during a formal review period. In accordance with Section 15105(b) of the CEQA Guidelines, the public review and comment period begins on April 22, 2022 and ends at 5:00 p.m. on May 23, 2022. Copies of all written comments on the Draft IS/MND that are received during this comment period will be included in the Final IS/MND. No in-person or virtual public meeting or workshop is planned for the Project.

The Draft IS/MND will be available for a 30-day public comment period: April 22, 2022 through May 23, 2022. The public may submit written comments regarding the proposed Project and the adequacy of the Draft IS/MND. Written comments on the Draft IS/MND must be postmarked or received by e-mail no later than Monday, May 23, 2022 at 5:00 pm. Please be sure to include your name, address, and telephone number in your correspondence.

Written comments on the Draft IS/MND should be sent to:

CPUC c/o ESA, Attn. Michael Manka/Gates
1425 N. McDowell Blvd.
Suite 200
Petaluma, CA 94954
lspgates@esassoc.com

Availability of Draft IS/MND.

Copies of the Draft IS/MND will be available for public review on the Project website:

<https://ia.cpuc.ca.gov/environment/info/esa/gates/index.html>

This website will be used to post all public documents during the environmental review process. Printed copies or CD copies of the Draft IS/MND may be requested by e-mail at lspgates@esassoc.com.

Project information repositories include the following public libraries:

Fresno County Main Library 2420 Mariposa Street Fresno, CA Phone: (559) 600-7323	Coalinga-Huron District Library 305 N 4 th Street Coalinga, CA 93210 Phone: (559) 935-1676	Huron Public Library 36050 O Street Huron, CA 93234 Phone: (559) 945-2284
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1.3 CPUC Jurisdiction

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order No. 131-D, Section XIV.B:

“Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.”

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties’ and cities’ land use regulations are not applicable to the Project as local jurisdictions do not have jurisdiction over the Project. Accordingly, the discussion of local regulations in this IS/MND is provided for informational purposes only.

As stated in the Introduction, The CPUC’s decision on the Project is whether or not to approve the LSPGC application to construct and operate the Orchard Substation only. The construction and operation of the PG&E Interconnection Facilities, although analyzed in this CEQA document, are not considered part of the CPUC’s LSPGC application decision.

1.4 References

L.S. Power Grid, LLC (LSPGC), 2021a. *Proponent's Environmental Assessment Application of LS Power Grid California, LLC for Permit to Construct the Gates 500 kV Dynamic Reactive Support Project*. February 19, 2021.

LSPGC, 2021b. Response to Data Request #1 for the Gates 500 kV Dynamic Reactive Support Project. April 15, 2021.

LSPGC, 2021c. Revised Response to Data Request #1 for the Gates 500 kV Dynamic Reactive Support Project. May 12, 2021.

PG&E, 2020. Response 1 to CPUC Data Request dated December 4, 2020.

PG&E, 2021a. Response 2 to Data Request dated December 4, 2020.

PG&E 2021b. Response to CPUC Data Request dated July 8, 2021.

CHAPTER 2

Project Description

2.1 Introduction

LS Power Grid California, LLC (LSPGC or the Applicant) in its California Public Utilities Commission (CPUC) application (A-21-02-018), filed on February 19, 2021 (LSPGC, 2021a), requests a Permit to Construct (PTC) the Gates 500 kilovolt (kV) Dynamic Reactive Support Project. The application includes the Proponent's Environmental Assessment (PEA) prepared pursuant to Rule 2.4 of the CPUC's Rules of Practice and Procedure.

If approved, LSPGC would construct and operate the Orchard Substation which would consist of a +/- 848¹ million volt-amperes, reactive (MVAR) dynamic reactive device to be installed in a minimum of two, equally sized Static Synchronous Compensator² (STATCOM) units that would be independently connected to the existing Pacific Gas and Electric Company's (PG&E) Gates 500 kV Substation. Connection to the PG&E Gates Substation would require PG&E to construct and operate two single-circuit 500 kV interconnection transmission lines from the Gates Substation 500 kV bus to the Orchard Substation 500 kV take-off towers.

The Project for the purpose of this CEQA analysis includes both the Orchard Substation Facilities, and the PG&E Interconnection Facilities described in this section. The Project was identified by the California Independent System Operator Corporation (CAISO) to ensure the reliability of the CAISO controlled grid. The CPUC will use the information in this CEQA document to inform their decision whether or not to approve the LSPGC application to construct and operate the Orchard Substation only. The construction and operation of the PG&E Interconnection Facilities, although analyzed in this CEQA document, are not considered part of the CPUC's LSPGC application decision.

2.1.1 Project Objectives

The Project is proposed to address CAISO identified reliability issues as described in Section 2.3.1. The purpose of the Project is to provide dynamic reactive support at the PG&E Gates Substation, a 500 kV and 230kV level regional substation. The objectives for the Project as identified by the Applicant are as follows:

1. Ensure the reliability of a major portion of the California Independent System Operator Corporation (CAISO) controlled grid;

¹ The designation "±" indicates both leading (capacitive) and lagging (inductive) reactive power.

² A STATCOM device provides or absorbs reactive current to regulate voltage on electricity transmission networks.

2. Provide cost effective voltage control and other electric transmission grid benefits;
3. Support the provision of safe, reliable, and adequate electricity service to the PG&E service territory;
4. Facilitate the importation and use of renewable electricity to fulfill California’s energy policies and goals by ensuring reliable operation of the grid.

2.2 Project Location

The Applicant would construct, operate, and decommission the Orchard Substation on an approximately 20-acre undeveloped site located in Fresno County, California, approximately 1.0 mile northwest of the intersection of South Lassen Avenue (State Route [SR] 269) and West Jayne Avenue, approximately 3.3 miles southwest of the city of Huron, **Figure 2-1, Project Location**. The Orchard Substation site is directly north of and adjacent to the PG&E Gates Substation, within the northeast quarter of Public Land Survey System Section 33 of Township 20 South and 17 East. The surrounding area is primarily used for agriculture. Several existing solar facilities are located to the southwest. An existing unpaved road runs east-west between the Orchard Substation site and the PG&E Gates Substation. The site is zoned AE-20 (exclusive Agricultural District, 20-acre minimum lot size) (County of Fresno, 2021).

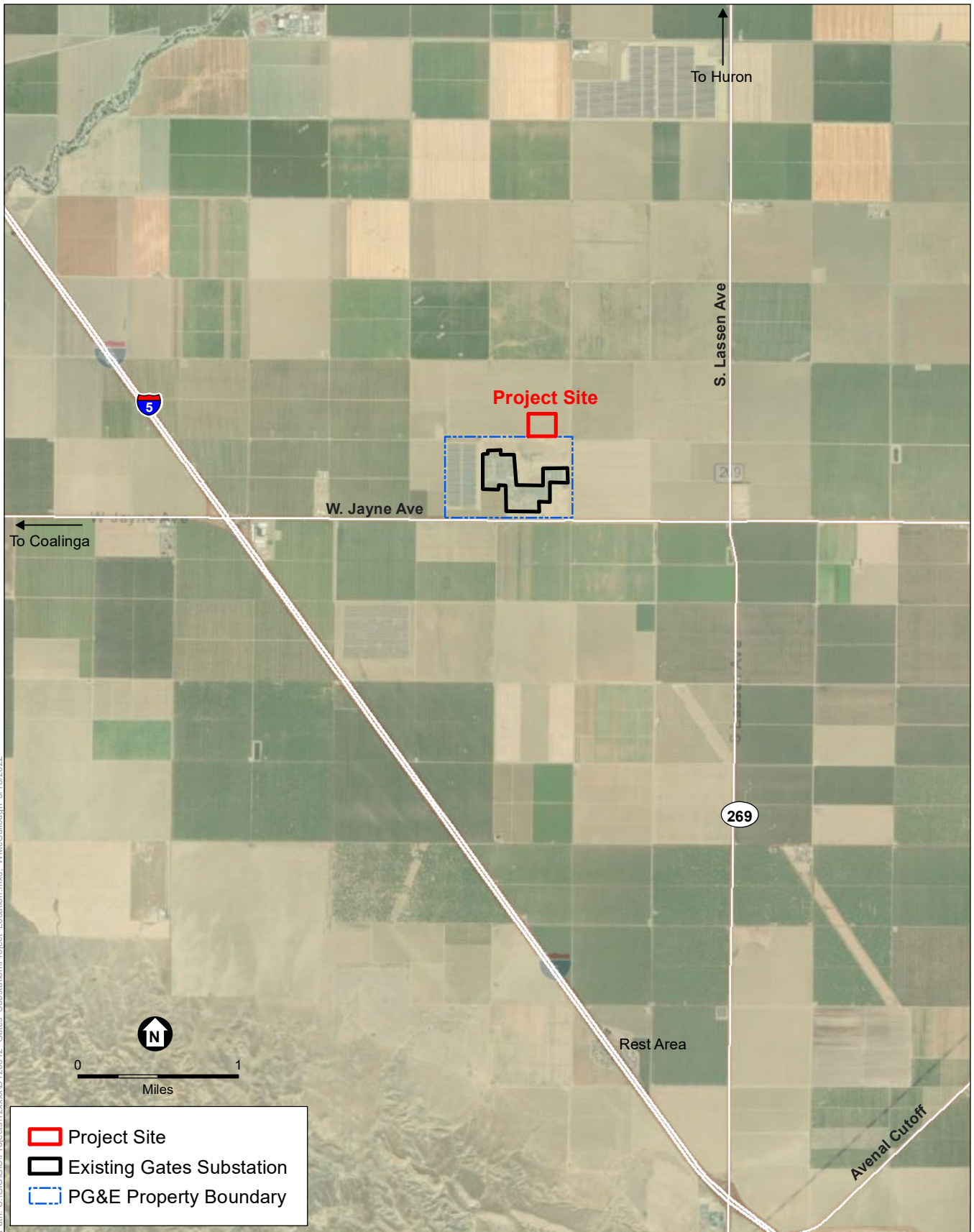
The PG&E interconnection facilities would be located within the PG&E Gates Substation property extending north of the existing block wall to the northern end of the Gates Substation property, which is currently undeveloped.

2.3 Existing System

The Project would connect with the PG&E Gates Substation which is within the existing regional transmission system that provides electricity to the greater Fresno area. Electric supply to the greater Fresno area is provided primarily by hydroelectric generation, several market facilities, and a few qualifying generation facilities. Electrical supply is supplemented by transmission imports from the North Valley and the 500 kV transmission lines along the west and south parts of the Central Valley (CAISO, 2018).

The greater Fresno area interconnects to the bulk PG&E transmission system by 13 transmission circuits. These consist of six 500 kV lines; six 230 kV lines; and one 70 kV line, which are served from the PG&E Gates Substation in the south, Moss Landing in the west, Los Banos in the northwest, Bellota in the northeast, and Templeton in the southwest (CAISO, 2018). The major 500/230 kV transmission lines that currently serve the PG&E Gates Substation include:

- Gates – Los Banos #3 500 kV;
- Gates – Los Banos #1 500 kV;
- Gates – Midway #2 500 kV;
- Diablo Canyon – Gates #1 500 kV;
- Gates – Midway #1 500 kV;
- Los Banos – Midway #2 500 kV;
- Gates – Panoche #1 & #2 230 kV;
- Gates – Midway 230 kV;
- Gates – Arco 230 kV; and
- Gates – Mustang #1 & #2 230 kV.



SOURCE: LSPGC, 2022

Gates Dynamic Reactive Support Project

Figure 2-1
Project Location



2.3.1 Existing System Reliability

Studies prepared by the CAISO identified high voltages on the 500 kV Diablo, Gates, and Midway buses starting when Diablo Canyon Nuclear Generation Station (Diablo Canyon) retires, currently scheduled for 2024 for Unit 1 and 2025 for Unit 2. Voltage on the Diablo 500 kV bus may become as high as 550 kV under normal system conditions after Diablo Canyon is retired, which is above the required limit (CAISO, 2018). The most critical system issues appear to be 2028 spring off-peak or 2028 winter off-peak, even when all transmission facilities are in service. If voltage fluctuations are not addressed, PG&E customers could experience periodic blackouts or scheduled outages once Diablo Canyon is retired.

Adding voltage support in the area would alleviate both high voltages after Diablo Canyon is retired, as well as high voltages under off-peak conditions prior to its retirement. It would also reduce dynamic stability issues with three-phase faults and induction motor stalling and tripping, which could also lead to outages within the electrical grid. As such, the CAISO identified the need for additional dynamic reactive support to both absorb reactive power under normal system conditions and supply reactive power with contingencies as needed.

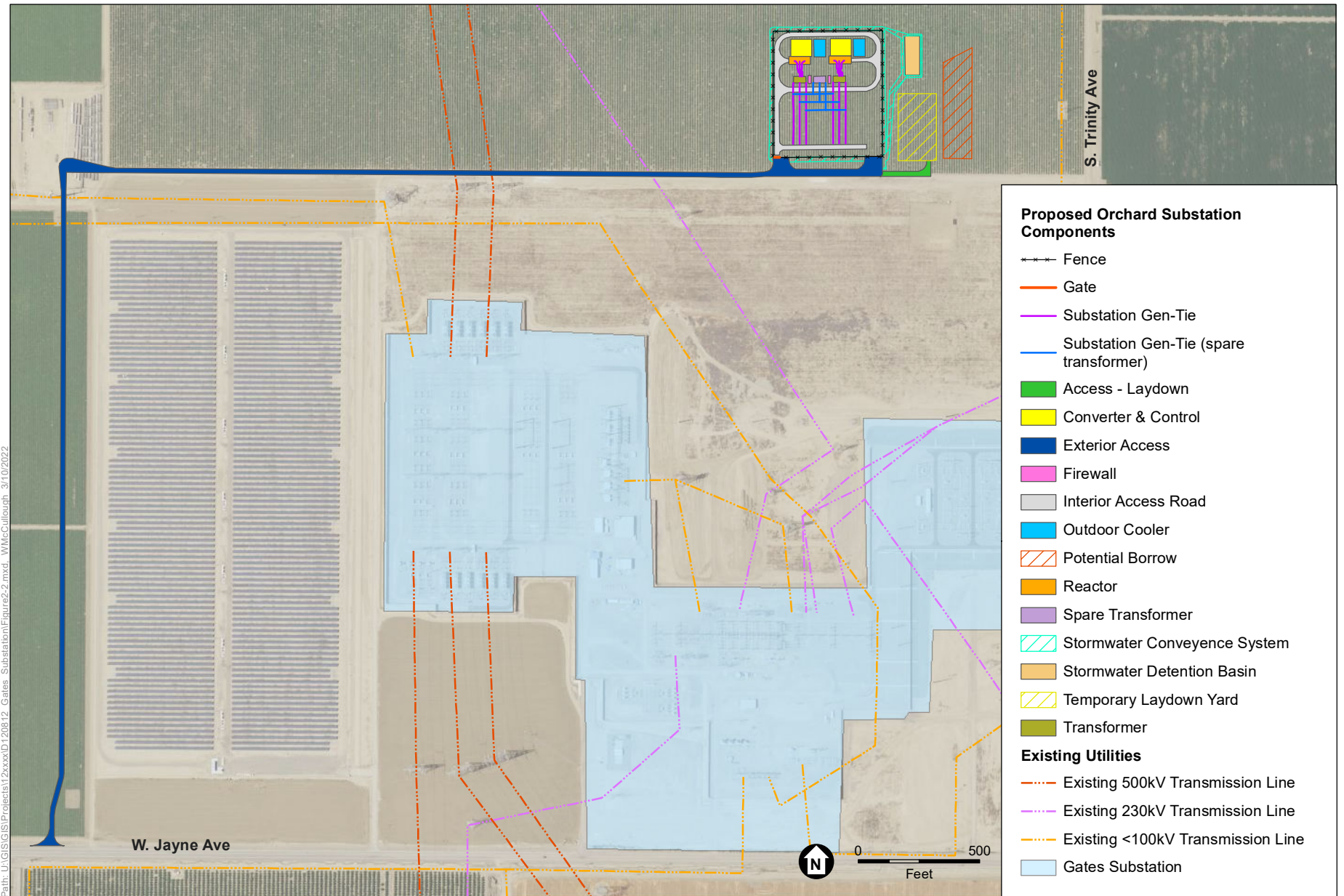
2.4 Proposed Project

The Applicant would construct the Orchard Substation providing approximately +/-848 million volt-amperes, reactive (MVAR) dynamic reactive capability to be installed in a minimum of two STATCOM units. The Project would have a rated real power output of zero mega-watts (MW) and a nominal terminal voltage of 500 kV. Therefore, the Project would not increase capacity, but would provide voltage support and grid stability at the Gates Substation 500 kV buses. Refer to **Figure 2-2, Project Overview**, for an illustration of the Project components relative to existing general features at and in the vicinity of the Project site.

As described in Section 2.1, the Project includes two major components; the LSPGC Orchard Substation Facilities and the PG&E Interconnection Facilities. This CEQA document has been developed to inform the CPUC's decision on whether or not to approve, approve with modifications, or deny LSPGC's Application to construct and operate the Orchard Substation facility. The PG&E Interconnection facilities are analyzed in this CEQA document because, combined with the Orchard Substation Facility, they constitute the Project being evaluated under CEQA. However, the PG&E Interconnection Facilities are not part of this application proceeding and will not be authorized under this specific CPUC's decision. To facilitate CPUC decision-making, the description of the two major components are presented in separate subsections.

2.4.1 Orchard Substation Facilities

Section 2.5 describes the primary components, construction, operation, and decommissioning of the Orchard Substation Facilities which include the Orchard Substation, access roads, below-ground conductor/cable, telecommunication lines and stormwater detention basin. Section 2.5 also presents applicant proposed measures, right-of way requirements, and an electrical magnetic field summary.



SOURCE: LSPGC, 2022

CPUC Gates Dynamic Reactive Support

Figure 2-2
Project Overview

2.4.2 PG&E Interconnection Facilities

Section 2.6 describes the interconnection facilities required to connect the Orchard Substation to the PG&E Gates Substation and the regional electrical grid. The interconnection is essential for the Orchard Substation to provide the dynamic reactive support necessary for the region. This component includes the PG&E 500 kV interconnection facilities and upgrades to the PG&E Gates Substation.

2.5 Orchard Substation Facilities

2.5.1 Orchard Substation Facilities Components

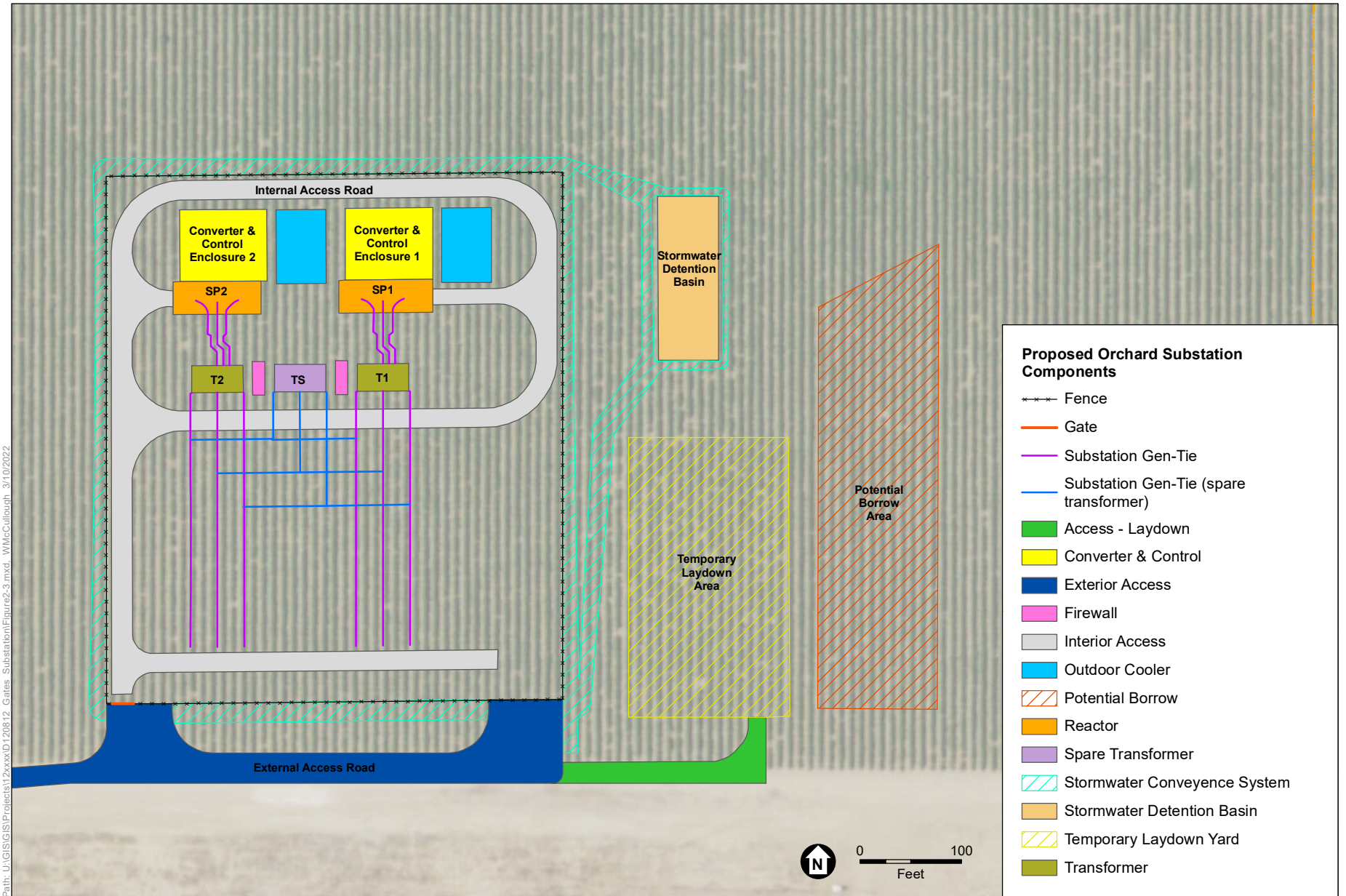
2.5.1.1 Orchard Substation

The Orchard Substation includes two STATCOM units and ancillary components, located immediately north of the PG&E Gates Substation within the proposed Orchard Substation site. Construction of this substation would permanently disturb up to 8.2 acres of the 20-acre site.

The general layout and arrangement of the proposed outdoor equipment associated with the STATCOM units is shown in **Figure 2-3, Orchard Substation General Arrangement**, and **Figure 2-4, Orchard Substation Profile**, provides a vertical depiction of the proposed substation including the approximate height of various equipment. In addition, a schematic diagram of the Orchard Substation is provided in **Figure 2-5, Orchard Substation Diagram**.

The proposed Orchard Substation comprises the following components:

- Lightning Shielding Masts;
- Two 500 kV Circuit Breakers;
- 500 kV Bussing;
- 500 kV Group Operated Disconnect Switches;
- 500 kV Surge Arresters;
- 500 kV Potential Transformers;
- Two 500 kV Take-Off Towers;
- Three 3-Phase 500 kV Main Power Transformers (comprising two main transformers and one installed spare that would likely be rotated into service within the first 10 years of operation);
- Outdoor Heating Ventilation and Air Conditioning (HVAC) equipment and insulated gas bipolar transistor (IGBT)/Convertor Cooling Equipment;
- Outdoor Air Core Reactors;
- Outdoor Medium Voltage Bussing;
- Outdoor Medium Voltage Instrument/Auxiliary Transformers;
- Outdoor Medium Voltage Surge Arresters; and
- Outdoor Medium Voltage Group Operated Disconnect Switches.



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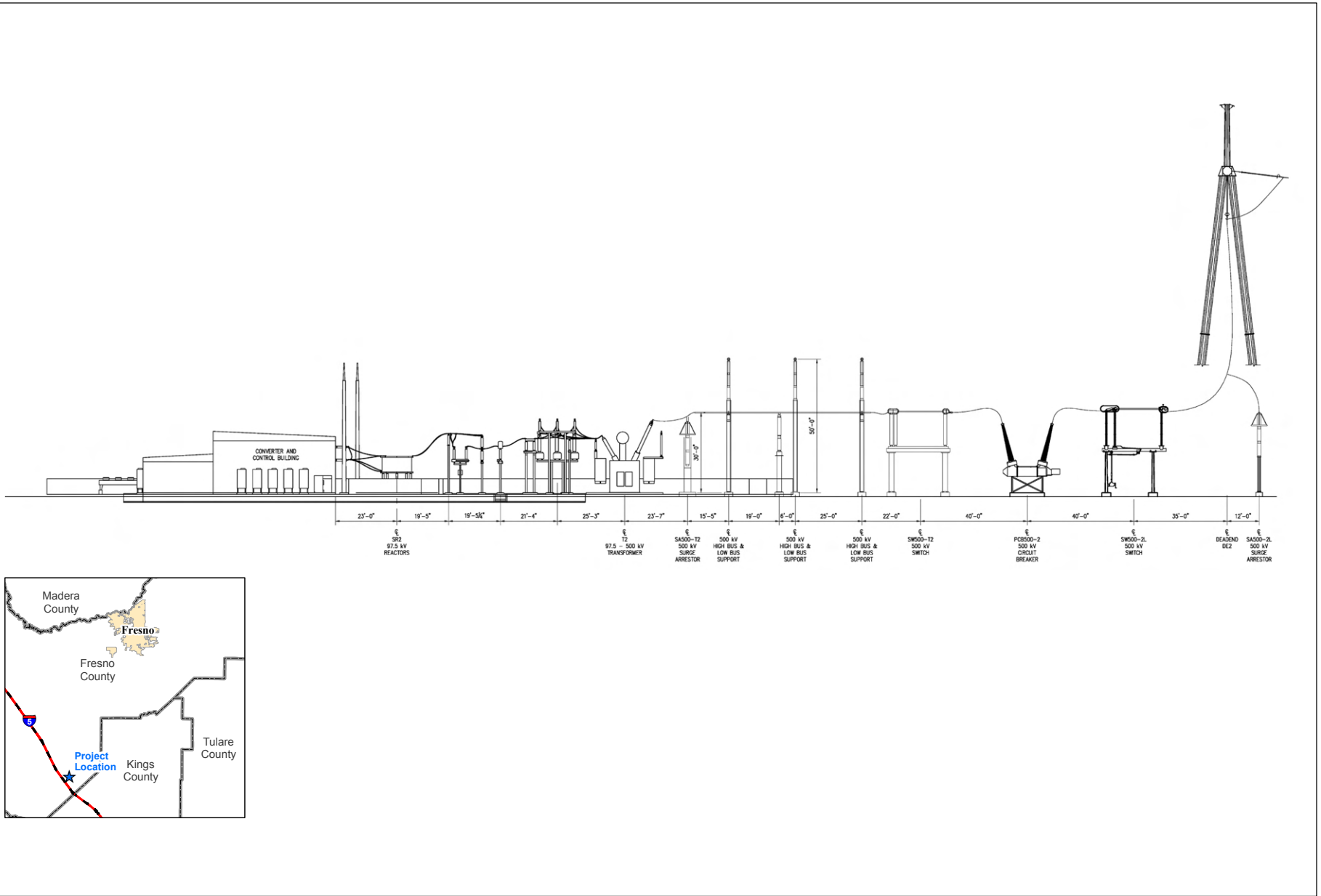
SOURCE: LSPGC, 2022

CPUC Gates Dynamic Reactive Support



Figure 2-3
Orchard Substation General Arrangement

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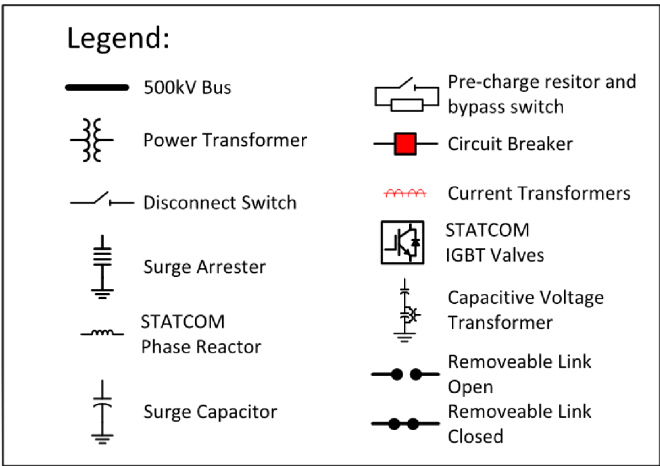
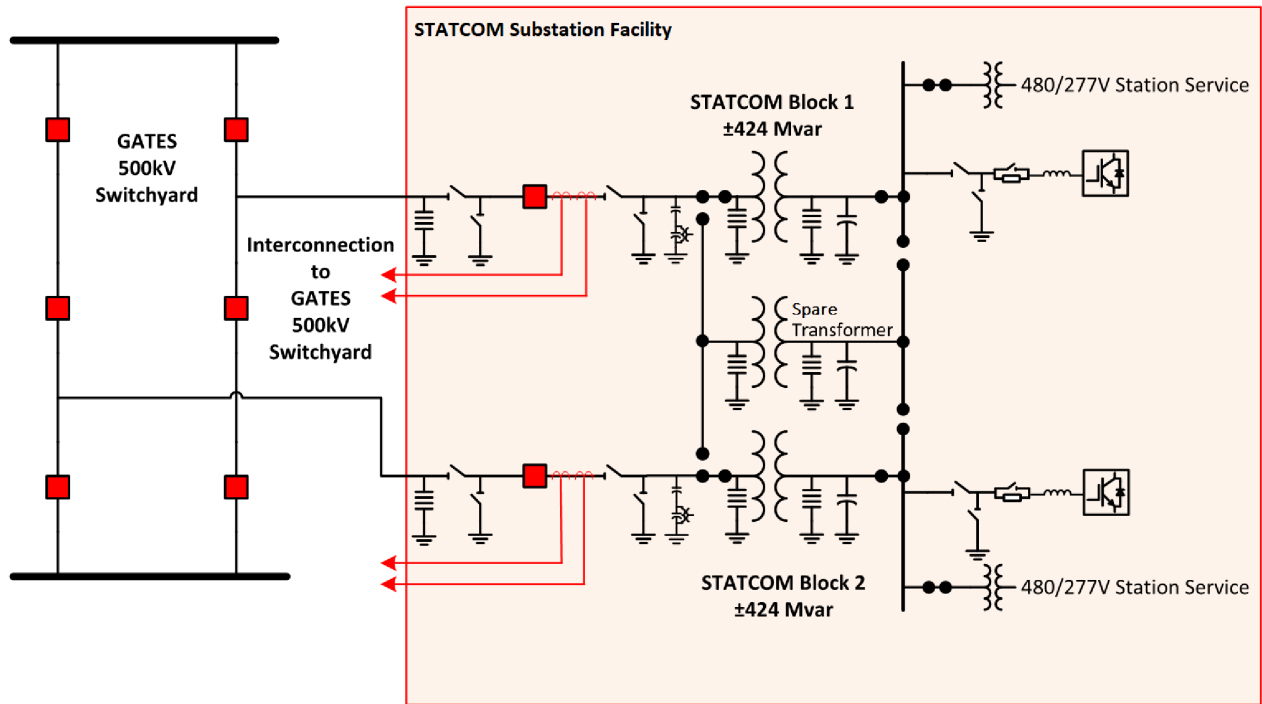
SOURCE: LSPG CA, LLC. 2021

CPUC Gates Dynamic Reactive Support

Figure 2-4
Orchard Substation Profile



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SOURCE: LSPG CA, LLC. 2021

CPUC Gates Dynamic Reactive Support

Figure 2-5
Orchard Substation Diagram



In addition, the two approximately 4,000 square-foot STATCOM IGBT Valve/Control Enclosures (painted ANSI 7- light grey) would contain the following equipment:

- IGBT Converters;
- Protective Relaying and Control Equipment;
- Supervisory Control and Data Acquisition (SCADA) Equipment;
- Cooling equipment;
- AC/DC Auxiliary Power Equipment; and
- Spare Parts and Maintenance Tool Storage.

All major equipment (e.g., power transformers,³ power circuit breakers,⁴ reactors,⁵ IGBT value/Control Enclosures, cooling equipment) would be installed on concrete foundations. Foundations would be either slab or drilled pier and range from 15 to 80 feet wide and 15 to 90 feet in length. Foundation depths would generally be between two to 4.5 feet, with the exception of the 500kV bus supports which would be 20 feet in depth and the 500 kV take-off towers, which would be 30 feet in depth (LSPGC, 2021a).

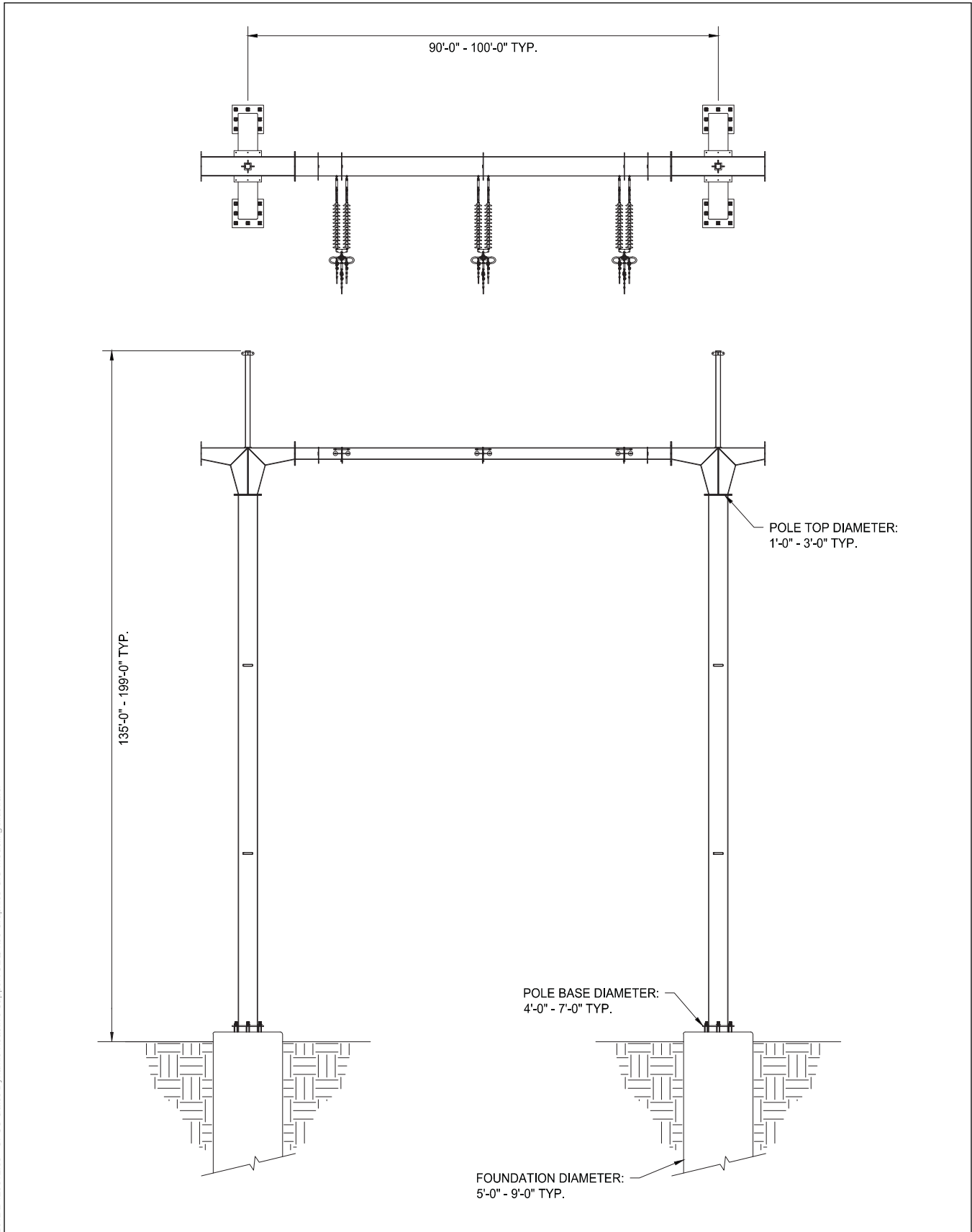
Each of the three power transformers would require up to 18,500 gallons of oil; a total of approximately 55,500 gallons. Each transformer would have an oil containment system consisting of an impervious, lined, open, or stone-filled sump area around the transformer. This containment system would be designed to contain the oil volume of the transformers plus the 25-year 24-hour storm. The take-off towers, which would include 75-foot lightning shield masts (see **Figure 2-6, Substation Take-Off Towers**) would be the tallest structures within the Orchard Substation and would be approximately 135 to 199 feet in height on concrete piers set approximately 30 feet below ground-level (LSPGC, 2021b). The substation would also include the construction of a stormwater detention basin and conveyance system. The substation would be surrounded with chain link and barb wire security fencing approximately nine feet in height with secure gates and would be accessible only by LSPGC staff and maintenance/emergency services contractor personnel.

Lighting would be installed at the Orchard Substation and would conform to National Electric Safety Code (NESC) requirements and other applicable outdoor lighting codes. NESC recommends, as good practice, illuminating the substation facilities to a minimum of 22 lux or two foot-candles. The facility would not require 24-hour illumination. Photocell controlled lighting (motion detection) would be provided at a level sufficient to provide safe entry and exit to the Orchard substation and control building. Additional manually controlled lighting would be provided to create safe working conditions at the Orchard substation facility when required. All lighting would be shielded and pointed down to minimize glare onto surrounding properties.

³ Transformers are electrical equipment components that transforms electric current from one voltage to another (LSPGC).

⁴ Circuit Breakers are electrical protection devices that are used to isolate equipment in the event of a system fault, providing both safety and equipment protection (LSPGC).

⁵ STATCOM Reactors and electrical equipment components that remove harmonics from the electric current and smooth the current waveform, providing system reliability (LSGPC).



SOURCE: LSPG CA, LLC. 2021

CPUC Gates Dynamic Reactive Support

Figure 2-6
Substation Take-off Towers



The Orchard substation would be equipped with distribution-level power from station service transformers located within the facility that would step-down the energy from the PG&E 500 kV interconnection transmission lines to distribution power level. An electric overhead distribution line would be installed to provide backup power for the Orchard Substation facility from an existing PG&E distribution line located along the eastern boundary of the Project site (see Section 2.6.1 for details).

2.5.1.2 Access Roads

Primary access to the Orchard Substation site for construction, operations, and maintenance (O&M) would be from West Jayne Avenue, a public road that is approximately 30 feet wide and provides access to the existing PG&E Gates Substation and the Orchard Substation site from I-5 to the west and from SR 269 to the east. No improvements are expected to be required along West Jayne Avenue as part of the Project.

Access to the Orchard Substation site from West Jayne Avenue would be from a new exterior access road.⁶ This road would be located completely on private property not owned by PG&E, and access from West Jayne Avenue would be achieved west of the Gates Substation, just west of the existing solar power plant. The access road would parallel the west side of the solar power plant to a location near the northwest corner of the PG&E Gates Substation where the access road would turn east and would lead directly to the Orchard Substation driveways. It would span two private properties APN 075-060-665 and APN 075-600-067S for a total approximate length of 6,600 feet (1.25 miles). This approximately 20-foot-wide exterior access road would be graded flat and gravel or base rock used to create an all-weather, dust resistant surface. The first 100 feet of the exterior access road from West Jayne Avenue would be paved. The total disturbance area for the access road would be approximately 1.5 acres.

Additionally, the Project would include the development of one new access road, which would provide internal access within the Orchard Substation facility during construction and O&M. This new internal access road⁷ would be located around the inside perimeter of the Orchard Substation.

2.5.1.3 Below-Ground Conductor/Cable

Below-grade facilities associated with the Orchard Substation would include equipment foundations, oil containment for transformers, the grounding grid, low voltage cable needed for the STATCOM equipment, telecommunication lines, conduit, and erection of the control enclosures. No other below-grade facilities or cable installations are proposed.

2.5.1.4 Telecommunication Lines

The Project would include a SCADA system that would consist of fully redundant servers, power supplies, and Ethernet Local Area Network (LAN) and Wide Area Network (WAN) connections,

⁶ Exterior access roads refer to roads that provide direct access to the Project site from the broader road network.

⁷ The internal access road refers to the road that would provide access around the perimeter of the Project site, within its gated area.

routers, firewalls, and switches. It is anticipated that two telecommunication lines would be connected to the Orchard Substation (one primary and one secondary line). The primary telecommunication connection line would be provided by AT&T and would be routed from an existing line underground for approximately 7,700 feet from public right-of-way (ROW) along the northern road shoulder of West Jayne Avenue. The primary line would be routed from the public ROW to the Orchard substation along the Project's access roads. The secondary telecommunication line would parallel the primary telecommunication line from the Orchard substation along the east-west and north-south exterior access roads for approximately 2,500 feet to the connect point with an existing telecommunication line that runs diagonally through the north-south access road and eventually into the PG&E Gates Substation.

The secondary line would be connected within the boundary of the north-south access road. The secondary telecommunication line would be routed along the east-west access road and then north-south along the eastern property boundary of the PG&E Gates Substation for approximately 2,500 feet. The secondary telecommunication line would then connect to an existing telecommunication line that runs diagonally into the PG&E Gates Substation.

Additionally, the Project may include a second communication option that would provide telecommunication diversity back to its off-site control center. This option would likely comprise a Long-Term Evolution (LTE) cellular connection from the control enclosures located at the Orchard Substation.

An optional primary telecommunications line route was identified. This alternative primary telecommunications line would connect to an existing communications line located approximately 750 feet east of the intersection between the north-south exterior access road and West Jayne Avenue, along the northern shoulder of the road. From there, the alternative primary telecommunications line would be routed north along the portion of the north-south exterior access road, west of the existing solar array. The telecommunications line would then turn east and be routed along the alternative east-west exterior access road before connecting to the Orchard Substation immediately north.

2.5.1.5 Stormwater Detention Basin

The Orchard substation would include a stormwater management system consisting of a stormwater drainage and conveyance system and an approximately 1,250 cubic yard stormwater detention basin (Figure 2-3). The Orchard Substation pad would be graded to drain directly toward the stormwater detention basin. This would drain via a lined ditch to the basin. The earthen stormwater detention basin would not be lined, allowing for infiltration and groundwater recharge. The stormwater detention basin is designed to capture the runoff from the 100-year storm and 24-hour rainfall event and then release the captured water over 48 hours.

2.5.2 Construction of Orchard Substation Facilities

This section provides an overview of the typical methods that would be used for construction of the Orchard Substation Facilities.

2.5.2.1 Site Preparation

Surveying and Staking

The Applicant would survey and mark the centerline at line-of-sight intervals, at points of intersection (including offset stakes marking the edges of the access road ROW), and at all known underground facilities. The Applicant would also clearly mark any sensitive biological, cultural, paleontological, or hydrological resources, where appropriate, to restrict construction activities and equipment from entering those areas.

Utilities

Prior to initiating construction, the Applicant would contact Underground Service Alert (USA), also known as USA North 811, to identify underground utilities within or close to the Project site. There are no existing overhead utilities that would need to be relocated to accommodate the Orchard Substation, and it is not anticipated that any underground utilities would be identified along any of the Project components. In the event underground utilities are identified, the Applicant would work with the owner of those utilities to determine if design changes can be made or if relocation procedures and locations would be necessary.

A distribution line would be installed to provide power for construction from the existing PG&E distribution line located along the eastern boundary of the Orchard Substation site. The distribution line would be installed on approximately 20 wood poles that would be placed on the northern side of the Project's external east-west access road and into the Orchard Substation. The distribution poles would be approximately 30 to 40 feet in height and would be direct imbedded into the ground (approximately 8 to 10 feet) with use of a truck-mounted auger and boom truck. A pad mounted service transformer would also be installed. The distribution line would also serve the Orchard Substation during the O&M phase of the Project.

Vegetation Clearance

Depending on the construction start date, construction of the Orchard Substation and stormwater detention basin could require clearing of approximately eight acres of cultivated cropland. However, at the time of this analysis, the site is not actively cultivated, the vineyards previously occupying the site have been removed by the landowner. Construction of the new access road and the transmission line poles/towers may require clearing of approximately one acre of cropland. Vegetation removal would occur only within approved work areas and would be completed using mechanized removal equipment or by hand using chain saws. Vegetation removal would not occur outside of approved work areas. There are no trees present on-site or along the transmission line ROW that would require removal or trimming. Following initial clearing of the Orchard Substation site, topsoil would be salvaged to a depth of 12 inches, or to actual depth if shallower, for on-site storage and use in site restoration, as appropriate. Salvaged topsoil material would be kept on-site in the immediate vicinity of temporary disturbance areas or at a nearby approved work area to be used in restoration of temporary disturbed areas (including the borrow area), as appropriate.

2.5.2.2 Excavation and Grading

Earth-moving activities would be required for the construction of the Orchard Substation and associated improvements. Permanent cut-and-fill slopes for the Orchard Substation and access road would be stabilized during construction with best management practices (BMPs) outlined in the Orchard Substation's Stormwater Pollution Prevention Plan (SWPPP), the BMP manual, and as detailed in Section 3.2.10, *Hydrology and Water Quality*. The SWPPP BMPs would remain in place and would be maintained until new vegetation is established in temporarily disturbed areas. No new landscaping is proposed within or surrounding the Orchard Substation. Grading, excavation, material removal, and gravel quantities anticipated for the Orchard Substation, access roads, telecommunication facilities, and electrical distribution line are summarized in **Table 2-1, Project Grading Summary**.

**TABLE 2-1
PROJECT GRADING SUMMARY (ORCHARD SUBSTATION FACILITY)**

Grading Description	Quantity	Material Description
Total Cut	36,000 cubic yards	Excavated earthwork material (topsoil included)
Total Fill	33,600 cubic yards	Placed and compacted material (surfacing included)
Excess Material	2,000 cubic yards	Material to be removed from site
Substation Surfacing and Flexible Base	12,000 cubic yards	Gravel to be imported (included in total fill 4 to 8 inches)
Staging Area Surfacing and Flex Base	2,000 cubic yards	Gravel to be imported (included in total fill 4 to 8 inches)
Access Roads	3,000 cubic yards	Gravel to be imported (included in total fill 4 to 8 inches)
Maximum Cut-Slope Depth	20 feet	Maximum depth of excavation from ground surface
Maximum Fill-Slope	2 feet	Maximum height of filling from ground surface

SOURCE: LSPGC, 2021a.

Generally, grading and excavation would be accomplished in a phased approach. During earthwork, soils and other surficial deposits that do not possess sufficient strength and stability to support structures would be removed from the work area. Removal would typically extend to competent materials with high mechanical strength, resistant to erosion and deformation. Material that requires processing would be mechanically processed on-site to achieve a maximum particle size and distribution suitable for conventional placement in engineered fills.

As a result of the grading, approximately 2,000 cubic yards of fill would be hauled off site. In addition to general earthmoving quantities, approximately 4 to 8 inches of surface gravel would be required to be imported and installed at the Orchard Substation site for grounding purposes, as well as at the staging area and access roads to provide stability and prevent unnecessary sediment transport off site. It is anticipated that a total of approximately 17,000 cubic yards of gravel would be imported from a suitable nearby aggregate source. All clean spoils excavated for the Project would be used on-site to balance cut and fill calculations, as feasible. All spoils that are not useable and/or contaminated would be sent to a properly licensed landfill facility. All recyclables would be taken to a licensed recycle facility, and all refuse would be taken to Avenal Landfill or another suitable landfill facility.

2.5.2.3 Staging Areas

The Project would include an approximately 1-acre temporary construction staging area within the footprint of the 20-acre Orchard Substation site, directly east of the Orchard Substation, as depicted in **Figure 2-7, *Construction Staging Areas***. The staging area may be used as a refueling area for vehicles and construction equipment; as an equipment wash station; for equipment assemblage; for storage of material, equipment, and containers; to house the construction trailers and portable restrooms; and for parking and lighting. Some STATCOM equipment, such as disconnect switches, instrument transformers, take-off towers, insulators, conductors, bus, connectors, conduit, cable trench, rebar, etc., would be received and temporarily stored at the staging area prior to installation. The staging area would be temporarily fenced and gated and would be connected to the exterior access road via a temporary driveway.

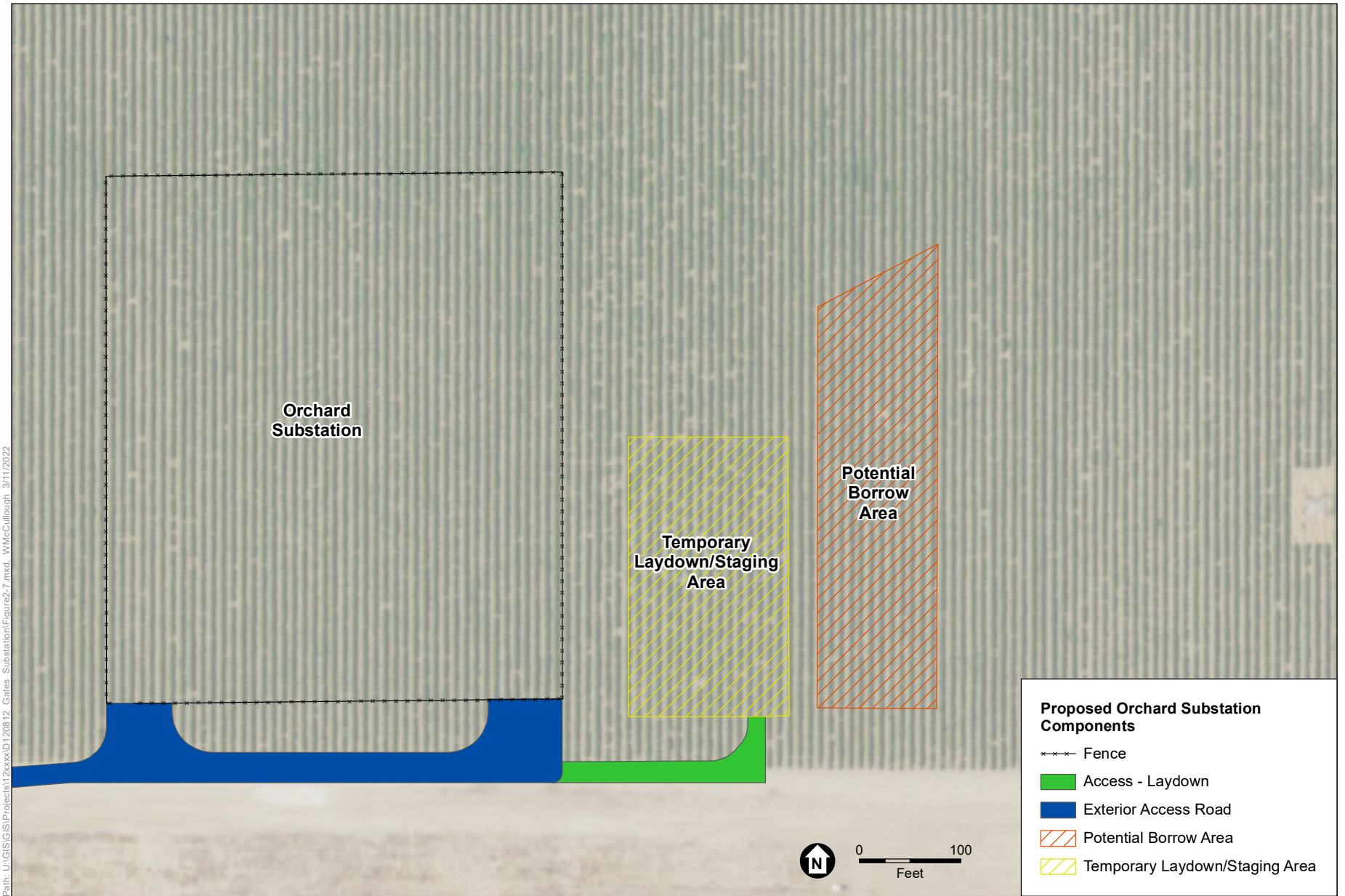
Staging area preparation would involve clearing, grubbing, and limited grading of the area. In-ground perimeter security fencing would then be installed around the outer limits of the staging area work area. Lighting would also be installed for security purposes. Temporary construction power would be provided from an existing distribution line near the Project site. The distribution line would be extended to the Project site staging area on installed new wood poles. Temporary generators would be a contingency if it is determined that distribution power is unavailable. Gravel may be used to line the ground at the staging area to avoid the creation of unsafe surface conditions and unnecessary sediment transport off site. Construction workers would typically meet at the staging area each morning and park their vehicles. All construction equipment and vehicles associated with the Orchard Substation construction would be parked within the staging area while inactive and at the completion of each workday, where practical.

2.5.2.4 Work Areas

Orchard Substation

The construction of the Orchard Substation would require grading, fill, and the installation of silt fencing that would extend beyond its proposed fence line. In addition, work areas would be needed around the perimeter of the Orchard Substation, borrow area, and stormwater detention basin to facilitate construction activities and access. The proposed Orchard Substation would total 6.5 acres within its fence line and the stormwater detention basin and conveyance system would total 1.1 acres.

It is anticipated that all major electrical and Orchard Substation equipment such as power transformers, power circuit breakers, control enclosures, capacitors, and reactors would be delivered to the Orchard Substation site and placed directly on previously constructed foundations. Other Orchard Substation equipment, such as disconnect switches, instrument transformers, transmission structures, insulators, conductors, bus, connectors, conduit, cable trench, rebar, etc., would be received and temporarily stored at the staging area prior to installation. All construction equipment and vehicles associated with Orchard Substation construction would be parked within the staging area while inactive and at the completion of each workday, when practical.



SOURCE: LSPGC, 2022

CPUC Gates Dynamic Reactive Support

Figure 2-7
Construction Staging Area

Other Work Areas

Other work areas would be required for construction/installation of the Orchard Substation, stormwater detention basin, overhead facilitates, storage, and staging of construction equipment and materials. In addition, the Project would utilize an on-site dirt borrow area that would be approximately 1.10 acres in size. The borrow area would be excavated to a depth of approximately 20 feet with an average slope of 3:1. The borrow area would be used to build up the Orchard Substation pad and would then be filled back to original grade with the topsoil that would be removed from the Orchard Substation pad site and stormwater detention basin. The location of the borrow area is identified in Figure 2-7, Construction Staging Area.

Following construction of the Orchard Substation, any disturbed workspace not required for safety during operation and maintenance would be restored, as feasible, to the approximate pre-construction conditions.

Work Area Disturbance

Construction of the Orchard Substation Facilities would result in both temporary and permanent disturbance, as summarized in **Table 2-2**, Work Area Disturbance and Dimensions. In total, the Orchard Substation Facilities would result in approximately 8.2 acres of permanent disturbance and approximately 3.8 acres of temporary disturbance to mainly agricultural and previously disturbed lands. **Figure 2-8, Project Disturbance Areas**, depicts the temporary and permanent disturbance areas that would be associated with the Project.

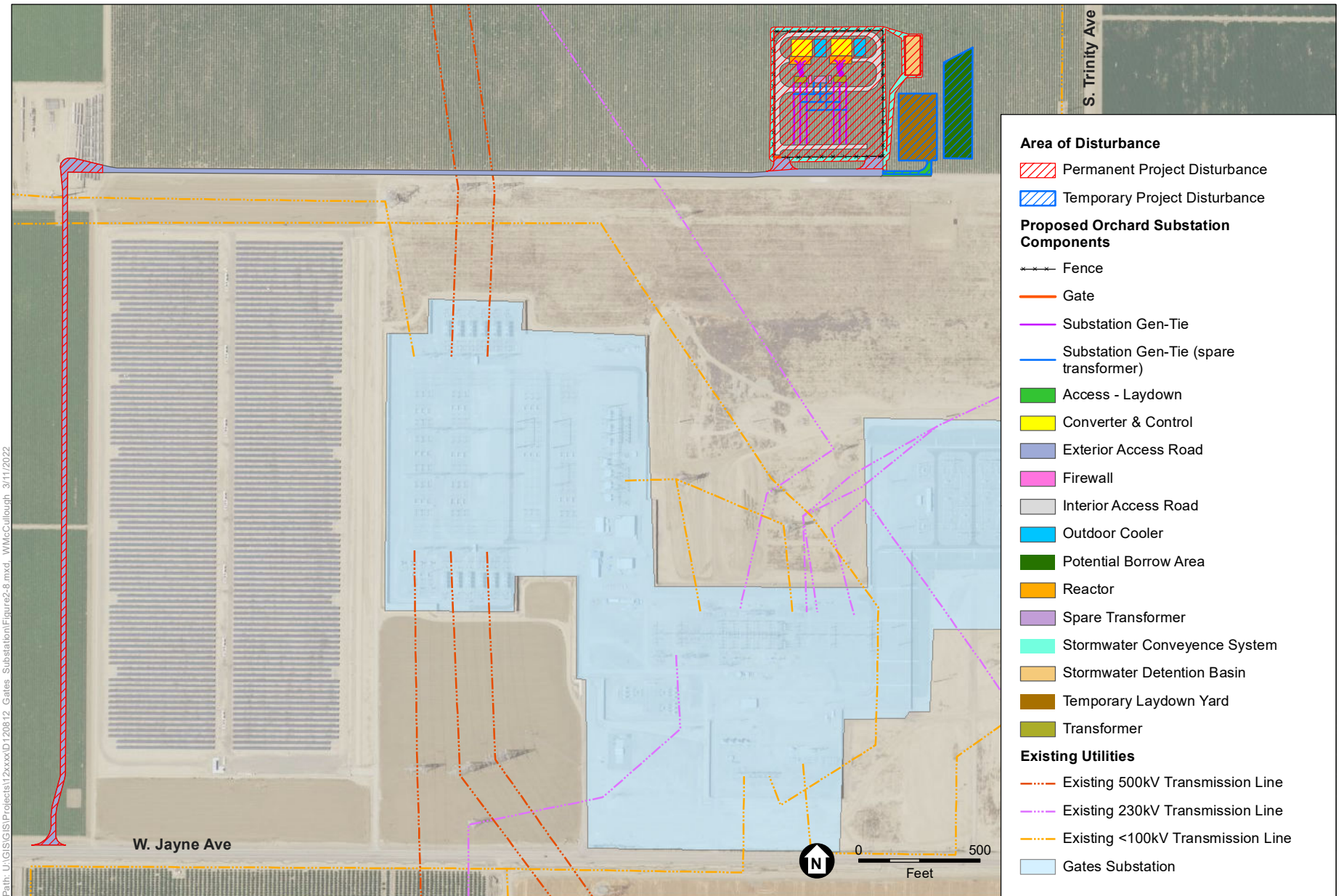
**TABLE 2-2
WORK AREA DISTURBANCE AND DIMENSIONS (ORCHARD SUBSTATION FACILITIES)**

Work Area	Temporary or Permanent Disturbance	Disturbance Area and Dimensions
Orchard Substation and ancillary Project components, including access road, grading, staging area, distribution power line, telecommunication lines, and dirt borrow area	Permanent	7.08 acres (Orchard Substation = 450 feet x 520 feet; 5.37 acres; access road = 2968 ft x 20 feet (approximate) = 1.52 acres; other components = 0.19 acres)
	Temporary	2.25 acres
Stormwater Detention Basin (and conveyance system)	Permanent	1.12 acres (Detention Basin = 0.22 acre; Conveyance System = 0.9 acre)
Primary Telecommunication Line (on West Jayne Avenue)	Temporary	1.5 acres; 3,250 feet by 20 feet

SOURCE: LSPGC, 2022

2.5.2.5 Temporary Power

An existing overhead distribution line near the Project site would be tapped for power during construction. A distribution line would be installed on wood poles to provide power to the staging area and the Orchard Substation during construction. The use of temporary generators for construction would be a contingency if distribution power were not available in a timely manner prior to construction. The same distribution line would also serve the Orchard Substation during O&M. The total permanent disturbance area for the new distribution power line (and pad mounted service transformer) would be within the disturbance area for the east-west permanent access road.



SOURCE: LSPGC, 2022

CPUC Gates Dynamic Reactive Support

Figure 2-8
Project Disturbance Areas

2.5.2.6 Access Roads

Construction of the Orchard Substation access road would not result in lane closures of the public road, West Jayne Avenue. No overland access routes or helicopter access would be used during construction or during O&M of the Project. As described in Section 2.5.1.2, the access road would be a newly constructed road approximately 20 feet wide and 6,600 linear feet. The access road would be monitored for damage and would be repaired as needed. The proposed new exterior access road located on private property not owned by PG&E, west of the Gates Substation. Road would span two private properties APN 075-060-665 and APN 075-600-067S. The road would be graded flat and gravel or base rock would be used to create an all-weather, dust resistant surface. The first 100 feet of the exterior access road from West Jayne Avenue would be paved. A total area of 1.5 acres would be disturbed to construct the exterior access road. The access road is depicted in Figure 2-2, Project Overview.

The Orchard Substation would include one new permanent interior access road, which would be constructed within the Orchard Substation site boundary along the inside perimeter to provide internal access within the site (Figure 2-2). The new access road would be approximately 20 feet wide and approximately 3,200 feet long and would require gate access at both the entrance and exit. The road would be graded and finished with gravel or rock. Permanent gates would be installed at both Orchard Substation driveways.

2.5.2.7 Orchard Substation

Facility Installation

Construction of the Orchard Substation would be phased beginning with site preparation and grading of the site, then installation of foundations and underground equipment, and at last installation and testing of electrical equipment. Prior to clearing and grubbing, all necessary surveys, markings, and installation of stormwater management features (e.g., silt fence, fiber rolls) would be completed. In addition, fencing driveways and gates would be installed (some on a temporary basis) to provide site security during construction activities. Following construction, temporary disturbance areas would be re-contoured to match pre-construction grades.

Following site preparation and grading, all necessary below-grade construction including structure and equipment foundations, underground ducts, ground grid, and construction of the control enclosure would begin. Once all earthwork and below-grade work are completed, major equipment and structures would be installed and anchored on their respective foundations. It is anticipated that all major electrical and Orchard Substation equipment such as power transformers, reactors, power circuit breakers, control enclosure, and reactors would be delivered to the Orchard Substation and placed directly on the previously constructed foundations. Other Orchard Substation equipment such as air disconnect switches, instrument transformers, transmission structures, insulators, conductors, rigid bus, connectors, conduit, cable trench, rebar, etc., would be received and temporarily stored at the construction staging area prior to installation. Transmission interconnection line terminations and distribution connections would be completed inside the Orchard Substation following final installation of the substation structures and equipment.

Civil Works

The civil works efforts include construction of the stormwater detention basin and conveyance system. The Orchard Substation pad would be graded to drain directly toward the approximately 1,250-cubic-yard stormwater detention basin. Construction of the stormwater detention basin would involve excavating the area with a bulldozer or excavator. Water trucks would be used to control dust, if necessary. The excess soil would be placed within the borrow area. The earthen stormwater detention basin would not be lined, allowing for infiltration and groundwater recharge. The conveyance system directing runoff from the Orchard Substation pad to the stormwater detention basin would be lined.

Take-Off Towers

The 500 kV take-off towers would be installed on four concrete pier foundations. Large augers and drill rigs would complete the required excavations and, if necessary, a reinforcing steel rebar cage would then be lowered into the excavation. An approximately 30-foot-tall form would be constructed, and concrete would then be poured to fill the excavation. Each completed foundation would be left to cure for approximately 28 days.

Typical equipment used for installation of transmission line tower foundations begins with truck-mounted augers and drills to excavate the holes. When foundations are needed, concrete trucks would supply and pour concrete into the excavated holes. Cranes would lift and place the new towers onto the newly installed foundations. Cranes and/or bucket trucks would lift workers into elevated positions to work on the newly installed towers. Crew cab and pickup trucks would be used to transport workers and tools to each installation site. The use of guard structures is not anticipated to be required for the construction of the Orchard Substation. Water trucks and portable water tanks would be used to minimize fugitive dust during excavation and restoration activities.

2.5.2.8 Telecommunications

The proposed telecommunication lines would be installed using open-cut trenching⁸ techniques. Prior to trenching, other utility companies would be notified to locate and mark existing underground utilities along the proposed underground alignment. Exploratory excavations (i.e., potholing) would also be conducted to verify the locations of existing facilities in the ROW. Coordination with Fresno County would also occur to secure encroachment permits for trenching in the county ROW, as required. It is anticipated that one lane of West Jayne Avenue would occasionally be closed during trenching activities. During lane closures, traffic controls would be implemented, as required by the encroachment permit.

Trenching operations would be staged in intervals so that only a maximum of 500 feet of trench (or as allowed by permit requirements) would be left open at any one time. The fill generated by excavation activities would be transported to an approved disposal site. At any one-time, open trench lengths would not exceed those required to facilitate the installation of the

⁸ Open-cut trenching is a traditional method for excavation, which involves excavating a trench that can then be back-filled (Wester Utility 2021).

telecommunication lines. Steel plating, tack welded and secured to the road, would be placed over the trenches to maintain vehicular traffic across areas that are not under active construction.

The trench dimensions for installation of the telecommunication lines would be approximately 2 to 3 feet deep and approximately 1 to 2 feet wide. Depths may vary depending on soil stability and the presence of existing substructures. The trench would be widened and shored, where necessary, to meet California Occupational Safety and Health Administration (Cal/OSHA) requirements. If trench water is encountered, trenches would be dewatered using a portable pump, and the water would be disposed of in accordance with acquired permits.

The telecommunication lines would be housed in one five-inch diameter polyvinyl chloride (PVC) conduit, which would be directly buried in the trench. Once PVC conduit is installed the trench would be backfilled and compacted. Where the cable trench would cross other substructures that operate at normal soil temperature (e.g., gas lines, telephone lines, water mains, storm drains, and sewer lines), a minimal radial clearance of 12 inches would be required. In instances where the cable trench would be installed parallel to other substructures, a minimum radial clearance of 24 inches would be required.

2.5.2.9 Public Safety and Traffic Control

Traffic control procedures or single lane closures may be implemented intermittently along West Jayne Avenue during construction to safely accommodate materials or equipment deliveries. Potentially, single-lane closures may be needed along West Jayne Avenue during the telecommunication line installation. Public safety controls or lane restrictions would be temporary, and detours are not anticipated to be necessary. Flaggers or other traffic control measures would be utilized to guide traffic around active work areas in a safe manner. All traffic-control plans and encroachment permits would be subject to Fresno County review and approval and provided to the CPUC prior to implementation.

2.5.2.10 Dust, Erosion, and Runoff Controls

Dust

During construction, migration of dust from the construction sites would be limited by implementation of a Project Dust Control Plan as required by the Applicant Proposed Measure (APM) AQ-2 (see Section 2.11). The Dust Control Plan would be prepared pursuant to San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 8120 and would be reviewed and approved by the SJVAPCD. Rule 8120 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site.

Erosion

Construction of the Orchard Substation Facilities would result in more than one acre of soil disturbance. As a result, the Applicant would be required to prepare, file, and implement a SWPPP in accordance with the State's General Permit for Stormwater Discharges Associated

with Construction Activities (2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The SWPPP would include measures to limit erosion and off-site transport of pollutants from construction activities. The plan would designate Best Management Practices (BMPs) that would be followed during construction to help stabilize disturbed areas and reduce erosion, sedimentation, and pollutant transport.

Runoff

The Orchard Substation Facilities would include a stormwater management system consisting of a stormwater drainage and conveyance system and a stormwater detention basin on the eastern portion of the Orchard Substation site. The Orchard Substation pad would be graded to drain stormwater directly into the perimeter drainage ditch that would ultimately convey water to the detention basin. The detention basin would not be lined, allowing for infiltration and groundwater recharge. The approximately 1,250-cubic-yard basin would be designed to capture the runoff from the 100-year storm, 24-hour rainfall event and then release the captured water over 48 hours. Overflow from the detention basin that would exceed the basin's design capacity would be released on a level spreader that would provide for sheet flow of the stormwater to the adjacent land surface. The level spreading approach would control erosion and prevent scouring at discharge locations.

2.5.2.11 Water Supply and Use

Water would be used (as needed) during construction of the Orchard Substation Facilities for activities such as dust suppression and compaction requirements. The majority of construction-related water use would occur during site development and below-grade construction phases. During construction, restroom facilities would be provided by portable units that would not require water. It is estimated that approximately 740,000 gallons of potable water would be used during the 22-month construction period. Water would be trucked in from an off-site location using local sources within the City of Huron or the City of Coalinga, both of which receive water from the Central Valley Project via the Westlands Water District (WWD).

2.5.2.12 Wastewater and Surface Water Runoff

Wastewater

Construction activities would be served by portable sanitary systems that would not be connected to the local wastewater system. Sanitary waste from the portable sanitary systems would be pumped routinely and would be transported by a licensed sanitary waste service for off-site disposal. Groundwater was not encountered during soil borings that were conducted as part of the Project's Geotechnical Engineering Report (LSPGC, 2021a), and therefore, dewatering during construction activities is not anticipated. While groundwater is not anticipated to be encountered, excavation dewatering effluent may be produced. This effluent would be filtered and managed in accordance with all state and federal regulations. (see Section 2.5.5; APM WQ-2 in Table 2-9, Applicant Proposed Measures). Sanitary wastewater would be generated at the rate of 50 to 100 gallons per week during construction. Sanitary wastes would be transported by the licensed sanitary wastewater service for off-site disposal at its contracted treatment, storage, and disposal facility.

Surface Water Runoff

All runoff from the Orchard Substation would be directed to the on-site detention basin to prevent any potential polluted runoff from entering nearby ditches. The Applicant would develop a SWPPP per APM WQ-1 (Table 2-8, Applicant Proposed Measures). The SWPPP would specify measures for each activity that has the potential to degrade surrounding water quality through erosion, sediment runoff, and the presence of other pollutants. These measures would be implemented and monitored throughout construction of the Orchard Substation Facilities by a qualified stormwater pollution prevention plan practitioner.

Stormwater runoff would be managed according to a stormwater management plan and associated SWPPP to comply with any general construction permits and approved by the local regional water quality control board. The Project site is not served by any existing or planned public or private stormwater drainage systems.

2.5.2.13 Hazardous Materials and Management

Hazardous Materials

Construction of the Orchard Substation Facilities would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Safety Data Sheets (SDS) would be made available at the construction site for all crew workers. Based on the anticipated volume of hazardous liquid materials, such as fuel, that would be stored and dispensed at the Project staging area, a Spill Prevention, Control, and Countermeasure (SPCC) Plan would be required (in accordance with applicable provisions of 40 C.F.R. Parts 112.1-112.7). Although not expected, if pre-existing hazardous waste is encountered on the Orchard Substation site, it would be removed and disposed of in a manner consistent with all state and federal regulations. Herbicides and/or pesticides are not proposed for use during construction.

Hazardous Materials Management

Prior to construction, a SPCC Plan and Hazardous Materials Management Plan (HMMP) would be prepared describing hazardous materials use, transport, storage, management, and disposal protocols. Construction would not begin until this plan is complete. The plans would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The HMMP would include the following information related to hazardous materials and waste as applicable:

- A list of hazardous materials that would be used on-site during construction and O&M to be updated as needed along with product SDS and other information regarding storage, application, transportation, and disposal requirements;
- A Hazardous Materials Communication (i.e., HAZCOM) Plan;
- Assignments and responsibilities of Project Health and Safety roles;
- Standards for any secondary containment and countermeasures that would be required for hazardous materials;

- Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Project area, and disposal protocols; and
- Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA trained individual and testing at a certified laboratory.

2.5.2.14 Waste Generation and Management

Solid Waste

Solid wastes generated during construction would primarily be non-hazardous wastes including wood, metal, paper, and plastic packaging. Construction debris volumes are estimated to total approximately 300 cubic yards. Earthwork associated with the Orchard Substation Facilities would require cut and fill, and excess cut material after completion of grading would be minimal (approximately 2,000 cubic yards). Waste volumes by type are presented in **Table 2-3**. During trenching excavations, the excavated material would be used as backfill when possible and would not be excess material. If possible, recyclable construction material would be transported to an approved recycling facility.

**TABLE 2-3
WASTE VOLUMES**

Waste Type	Construction			O&M			Decommissioning		
	Wood	Metal	Plastic	Wood	Metal	Plastic	Wood	Metal	Plastic
Waste Composition	60%	10%	30%	20%	20%	60%	15%	50%	35%
Reuse/Recycling Rate	90%	80%	50%	90%	80%	50%	90%	80%	50%
Total Waste Volume (CY)	300			10			50		

SOURCE: LSPGC, 2021c

Construction waste that cannot be recycled would ultimately be disposed of at the Avenal Regional Landfill or another approved facility. Construction waste would be disposed of properly and in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste including, but not limited to, the California Integrated Waste Management Act of 1989, which has set reduction rates for solid waste sent to landfills.

Liquid Waste

Liquid waste streams anticipated for the Project primarily include sanitary waste and stormwater runoff. Sanitary waste from self-contained portable toilets would be routinely pumped as needed and would be taken by the vendor to a proper sanitary waste facility for disposal, and any generated excavation dewatering effluent would be managed according to all applicable state and federal regulations. Stormwater runoff would be managed according to a stormwater management plan and associated SWPPP to comply with any general construction permits and approved by the Central Valley Regional Water Quality Control Board.

Hazardous Waste

As discussed in Section 2.5.2.13, *Hazardous Materials and Management*, construction of the Project would require the limited use of hazardous materials, such as fuels, lubricants, cleaning solvents, and chemicals. Additionally, the Project would include transformers containing mineral oil, which is considered a hazardous material in the state of California. Additional hazardous wastes that could be encountered during construction include contaminated soils, incidental spill waste, and concrete washout.

Wastes generated or encountered would be handled, contained, and disposed of according to local, state, and federal regulations. In addition, prior to construction, a HMMP would be prepared describing hazardous materials use, transport, storage, management, and disposal protocols. This could include containment and transport in Department of Transportation approved vessels, use of secondary containment, and training of material handlers to ensure worker safety and the reduction of cross contamination.

2.5.2.15 Fire Prevention and Response

Construction Fire Prevention Plan

The Orchard Substation site is not within a high fire threat area, as identified by CAL FIRE. However, to reduce any potential fire hazards during construction, a Project-specific Construction Fire Prevention Plan (CFPP) would be prepared pursuant to APM HAZ-4, which includes minimization and response measures (see Table 2-8, Applicant Proposed Measures).

Fire Breaks

During construction activities that are considered “hot work” (e.g., welding, grinding, or any other activity that creates hot sparks), the Applicant would implement a 10-foot buffer around that activity, and vegetation would be cleared to ensure sparks do not create a fire hazard. For activities that would not produce sparks but would still have potential to produce a fire hazard such as ground rod or ground wire installation, the Applicant would implement a 5-foot buffer to be cleared of vegetation, and additional details (i.e., handling sparks) would be provided in the CFPP described above.

Under Section 35 of General Order 95, the CPUC regulates all aspects of design, construction, and O&M of electrical power lines and fire safety hazards for utilities subject to their jurisdiction (CPUC, 2012). In addition, Fire Prevention Standards for Electric Utilities (California Code of Regulations [CCR] Title 14, sections 1250-1258) provide definitions, maps, specifications, and clearance standards for projects under the jurisdiction of California Public Resources Code (PRC) sections 4292 and 4293 in State Responsibility Zones. The Applicant would create a fire break around the Orchard Substation in accordance with all applicable state and federal regulations.

2.5.2.16 Construction Workforce, Equipment, Traffic, and Schedule

Construction Workforce

Construction of the Orchard Substation Facilities and the PG&E Interconnection Facility (Described in Section 2.6) would occur simultaneously. The construction workforce and equipment deployed for the Project would be typical for similar transmission line and substation construction projects of this size. The peak daily employment workforce would be up to approximately 20 workers, but on average the on-site daily workforce would be less. The workers would likely commute from the greater Fresno area.

Table 2-4, *Construction Equipment and Workforce*, lists the expected equipment and personnel by construction activity as well as a brief construction work plan summary for each activity. It also lists the uses of the equipment for each construction phase. This information is preliminary and not all equipment and personnel listed may be used during all portions of each specified construction phase and minor changes to personnel and equipment needs may be identified during final Project design or during construction based on site conditions. Note that the dates are estimated and are subject to the CPUC granting a PTC and the Applicant securing other required permits.

**TABLE 2-4
CONSTRUCTION EQUIPMENT AND WORKFORCE**

Construction Phase/ Equipment Description*	Estimated Horsepower	Equipment Quantity	Estimated Workforce	Estimated Start Date	Estimated End Date	Hours/ Day
Survey						
Pickup - 1/2 Ton	395	1	2-3	August 2022	January 2023	2
Road Work						
Truck - Water 4K	300	4	5-10	August 2022	September 2022	10
Loader - 4-5Yd	275	1				10
Truck - Dump 10-12 Yd	415	4				5
Motor Grader	250	1				10
Roller	405	1				10
Pickup - 1/2 Ton	395	1				2
Site and Staging Preparation						
Truck - Water 4K	300	4	10	August 2022	October 2022	10
Loader - 4-5Yd	275	1				10
Truck - Dump 10-12 Yd	415	4				5
Motor Grader	250	1				10
Roller	405	1				10
Pickup - 1/2 Ton	395	1				2
Pickup - 1 Ton	410	1				2
Below-Grade Construction						
Truck - Water 4K	300	4	20	November 2022	January 2023	10
Excavator	108	1				10
Forklift - 8-9K Reach	100	1				4

TABLE 2-4 (CONTINUED)
CONSTRUCTION EQUIPMENT AND WORKFORCE

Construction Phase/ Equipment Description*	Estimated Horsepower	Equipment Quantity	Estimated Workforce	Estimated Start Date	Estimated End Date	Hours/ Day
Below-Grade Construction (cont.)						
Backhoe - 2X4	68	1				5
Pickup - 1/2 Ton	395	3				2
Pickup - 1 Ton	410	2				2
Excavator – Mini	70	1				5
Loader - 4-5Yd	275	1				10
Pressure Digger - Lo-Drill (Tracked)	125	1				10
Truck - Dump 10-12 Yd	415	1				8
Trencher	75	1				5
Skid steer loader	74	1				10
Above-Grade Construction and Equipment Installation						
Pickup - 1/2 Ton	395	3	20	February 2023	January 2024	2
Pickup - 1 Ton	410	2				2
Welding Truck	395	1				2
17 Ton Crane	250	1				10
30 Ton Crane	130	1				5
10K Reach Forklift	130	1				5
15,000LB Forklift	130	1				4
40' Manlift	49	1				4
120' Manlift	74	1				4
Commissioning and Testing						
Pickup - 1/2 Ton	395	3	5 to 10	November 2023	May 2024	2
Pickup - One Ton	410	2				2
10K Reach Forklift	130	1				5
15,000LB Forklift	130	1				4
40' Manlift	49	1				4

NOTES:

* All equipment identified in this table are diesel powered.

SOURCE: LSPGC, 2021a.

Construction Equipment and Workforce

The diesel-powered equipment that would be used for each construction phase of the Project along with its estimated horsepower, quantity, start and end dates, and approximate duration of use in terms of hours per day provided in Table 2-4. As shown in the table, it is anticipated that a maximum of up to approximately 20 workers would be at the Project site on any given day associated with the above-grade construction and equipment installation phase and the commissioning and testing phase, which would overlap for several months.

A list of equipment types and associated uses is provided in **Table 2-5, *Anticipated Construction Equipment***.

**TABLE 2-5
ANTICIPATED CONSTRUCTION EQUIPMENT**

Equipment Type	Equipment Use
Air compressors	Operate air tools
Asphalt grinder	Grind asphalt
Backhoe	Excavate trenches
Bobcat	Excavate trenches
Boom truck	Access poles and other height-restricted items; lift/set steel
Boom truck with trailer	Deliver steel, disc, panels, and insulators
Bucket truck/manlift	Set steel; Install equipment; Use as guard structure
Bulldozer	Grade pads and access road; demolition; excavate and backfill walls
Bull wheel tensioner	Control conductor at pulling tension during pulling operation
Cable dolly	Pull cable
Cable dolly (trailer)	Transport reels of conductor (no engine; can be pulled by assist truck)
Compactor	Compact soil; clear/grub/finish
Concrete truck	Transport and process concrete
Crane	Lift, position structures
Drilling rig/ Truck-mounted Auger	Excavate for direct-bury and micropile poles; mounted auger
Dump truck	Haul excavated materials/import backfill, as needed
Excavator	Excavate soils/materials (trenching)
Forklift	Transport materials at structure sites and staging area
Grader	Road construction and maintenance
Jackhammer	Break concrete and asphalt
Line truck	Install clearance structures; pull cables/connections
Loader	Demolition; load dump trucks
Pickup trucks	Transport construction personnel
Portable generators	Operate power tools
Pulling rig	Pull conductor into position or duct and secure it at the correct tension
Reel trailer	Feed new conductor to the pulling and tensioner; collect old conductor
Relay/Telecommunication van	Transport and support construction personnel
Roller	Repair streets
Scraper	Grade pads and access roads
Splice trailer	Store splicing supplies
Tool van	Tool storage
Tractor/Trailer Unit	Transport materials at structure sites and staging area
Trencher	Trenching for underground telecommunication line
Wire truck	Hold spools of wire
Water truck	Provides water for dust suppression and other construction needs

SOURCE: LSPGC, 2021a.

In addition to use of the equipment identified above, pick-up trucks and construction worker vehicles are anticipated to travel daily to and from the work areas for each component of the Project. It is anticipated that additional maintenance and/or delivery trucks would travel to and from the staging areas between two and three times per week, or up to four times per week during peak activities.

Construction Traffic

All construction vehicles would enter the Orchard Substation site from West Jayne Avenue. Vehicles would turn onto the north-south access road from West Jayne Avenue. Signage and/or flaggers would be used to maintain public safety and reduce potential disruptions to traffic flow during construction. A designated parking area for worker vehicles would be established within the staging area adjacent to the Orchard Substation. As truck traffic would ingress and egress from a County-maintained roadway, Fresno County Traffic Control Permit and traffic control plan may be required. The Applicant would develop and implement a traffic control plan, pursuant to APM TRA-1 (see Table 2-8). All traffic-control plans and encroachment permits would be reviewed and approved by the County and would be provided to the CPUC prior to implementation. No existing sidewalks, trails, paths, or driveways would be impacted by the Project.

The peak vehicle trips would occur between approximately August 2022, through January 2023, during the earthwork and grading-related phases of the Orchard Substation Facilities construction (e.g., site development and below-grade construction activities) due to the hauling of debris from the site and importing of fill to the site. Total maximum daily vehicle trips (i.e., roundtrips) during this period would be approximately 45 trips per day, consisting of approximately 25 truck trips and 20 worker trips. Maximum daily truck trips include approximately 18 dump trucks (14 rock deliveries and 4 excess material haul off), four water trucks, and three equipment delivery trucks. Other periods of the Orchard Substation construction would have lower average worker vehicle trips and would, therefore, have correspondingly lower impacts. **Table 2-6, Estimated Average Daily Construction Traffic**, outlines the average daily truck and worker-related vehicle trips that would be associated with the Orchard Substation Facilities, as well as the vehicles miles traveled per construction phase.

**TABLE 2-6
ESTIMATED AVERAGE DAILY CONSTRUCTION TRAFFIC (ORCHARD SUBSTATION FACILITIES)**

Construction Phase	Average Daily Truck Trips	Average Daily Worker Trips	Average Daily Truck VMT ¹	Average Daily Worker VMT ²	Total Daily Average VMT
Site Development (includes survey, road work, site and staging yard preparation)	15	8	600 miles	800 miles	1,400 miles
Below-Grade Construction	10	15	400 miles	1,500 miles	1,900 miles
Above-Grade Construction and Equipment Installation	5	15	200 miles	1,500 miles	1,700 miles
Commissioning and Testing	5	5	200 miles	500 miles	700 miles

NOTES:
 1. Vehicle miles travelled (VMT) based on 40-mile round trips for all truck trips.
 2. VMT based on a 100-mile round trips for all worker trips.

SOURCE: LSPGC, 2021a.

Vehicle trips generated by construction personnel would generally be associated with workers arriving at the site in the morning and leaving the site at the end of the day, with limited worker-related trips during the middle of the day. Construction activities would occur Monday through Saturday during daylight hours. To reduce the potential number of daily worker-related vehicle trips to and from the Orchard Substation site, the Applicant proposes implementation of APM GHG-1 to encourage carpooling from their respective places of employment to the greatest extent possible (see Table 2-8, Applicant Proposed Measures).

Construction Schedule

The Applicant estimates that construction of the Project would take a total of approximately 22 months to complete, without any unforeseen/unpredictable factors such as bad weather. Construction is scheduled to begin in August 2022 and run through May 2024. The complete construction schedule, outlined by task, is summarized in **Table 2-7, Proposed Construction Schedule**.

**TABLE 2-7
PROPOSED CONSTRUCTION SCHEDULE**

Construction Phase	Start Date	End Date	Number of Workdays
Site Development (includes survey, road work, site and staging yard preparation)	08/2022	10/2022	90
Below-Grade Construction	11/2022	01/2023	90
Above-Grade Construction and Equipment Installation	02/2023	01/2024	360
Commissioning and Testing	11/2023	05/2024	210

Construction activities at the Project site would generally be scheduled to occur during daylight hours 6 days per week (Monday through Saturday). Night work is not anticipated to be necessary, but in case it is required, Fresno County and CPUC approval would be obtained. Construction activities could infrequently be scheduled outside of these hours to avoid or reduce schedule delays, complete construction activities, such as continuous concrete pours, to accommodate the schedule for system outages, or to address emergencies.

2.5.2.17 Post-Construction

Commissioning and Testing

Commissioning and testing would begin with activities that include equipment fit-up inspections and simple electrical tests to ensure the equipment is connected properly, followed by activities would include transformer energization then auxiliary electrical tests. After confirmation that the transformer and medium voltage electrical system are working properly, functional tests would begin on the STATCOM units to ensure the power electronic devices operate as designed. This includes various performance tests to ensure the STATCOM units can meet all necessary electrical output. While running these tests, the STATCOM cooling system would be tested to confirm adequate cooling of the power electronic devices. Lastly, the power electronic devices

and protection/control system would be tested and programed per the Project requirements. After this, the Project would be ready to be energized.

Commissioning and testing would require the use of pick-up trucks, forklifts, and manlifts and would utilize approximately 5 to 10 on-site construction personnel. Commissioning and testing of the Project would take approximately 7 months between November 2023 and May 2024, for a total duration of 210 workdays, at which point the Project would be fully functional and ready for commercial operation.

Landscaping

The Project would be located within an active agricultural area adjacent to an existing substation facility with no nearby residences. No landscaping at the entrance or around the Orchard Substation is proposed.

Demobilization and Site Restoration

Demobilization

Following completion of construction, the process of demobilization would begin. First, all equipment not needed for the remaining testing and revegetation would be removed. Next, all temporarily disturbed work areas would be restored to their approximate pre-construction conditions. See below for site restoration details.

Site Restoration

The Applicant would restore all areas (including the borrow area) that are temporarily disturbed by the Project activities to approximate pre-construction conditions. All areas would be carefully assessed to be sure all residual construction debris and waste would be removed and transported off-site to an approved disposal facility. Project waste materials that are routinely recycled would be recycled in an appropriate fashion at an approved disposal facility. The Applicant would conduct a final inspection to ensure that cleanup activities are successfully completed. Areas that are disturbed by grading, auguring, or equipment movement would be restored to their original contours and drainage patterns. Work areas would be decompacted, and salvaged topsoil materials would be re-spread followed by recontouring to aid in restoration of temporarily disturbed areas. Revegetation activities would be conducted in accordance with the Orchard Substation Facilities SWPPP and proposed APMs identified in Table 2-8, Applicant Proposed Measures. Restoration could include recontouring, reseeding, and planting replacement vegetation, as appropriate. Additional restoration opportunities could include preparing the site for future utility uses. Erosion control measures may be required and would also be implemented in accordance with the Orchard Substation Facilities SWPPP and proposed APMs.

2.5.3 Operation and Maintenance

2.5.3.1 System Controls and Operation Staff

Because the Orchard Substation would not be staffed onsite, the Orchard Substation would be remotely monitored by the Applicant's control center, which is staffed 24 hours a day, 7 days a week. If equipment malfunctions, O&M personnel would be dispatched to the site to investigate the problem and take appropriate corrective action. The Project would be operated by the Applicant's control center in Austin, Texas, and the Applicant's local maintenance/technical staff, utilizing other existing the Applicant staff and outside resources for maintenance and emergency response. The Project would be incorporated into the Applicant's existing programs with existing equipment, experienced staff, and trusted contractors to provide operational and cost efficiencies with reduced risks. The Project would also be monitored by CAISO's control center in Folsom, California, and CAISO would have operational control of the Orchard Substation with authority to direct the Applicant's control center.

The Applicant currently has five staff in its transmission maintenance group with an average experience of over 15 years. One additional local, California-based field personnel would also be added in 2023 to support maintenance of the Project facilities. The Applicant would also have a local, California-based engineer available to support any technical aspects of the Project. Day-to-day management of the Project would be by the Applicant's asset management teams based in Texas and Missouri.

2.5.3.2 Inspection Programs

In general, monthly inspections would be performed at the Orchard Substation to inspect each required piece of equipment and check that no obvious abnormalities exist. This would be performed without taking the Orchard Substation out of service. It is anticipated that the Orchard Substation would be taken out of service to perform more extensive checks and maintenance on the main components of the facility on an annual basis. Due to the diversity of equipment and the individual system components, a small, specialized team would execute the varying degrees of monthly and annual maintenance requirements. Inspection and maintenance would be performed by a small crew of one to two high voltage technicians and one to two personnel provided by the equipment vendor with support provided by the Applicant's staff.

2.5.3.3 Maintenance and Operations Programs

The Applicant would regularly inspect, maintain, and repair the Project and access roads following completion of Project construction. Typical O&M would involve routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service. The Applicant would perform aerial and ground inspections of the Project facilities and patrol above-ground components annually.

Routine maintenance is expected to require approximately six trips per year by crews composed of two to four people. Routine operations would require one or two workers in a light utility truck to visit the Project site monthly. It is anticipated that one annual major maintenance inspection

would occur, requiring an estimated crew of two to four personnel. This inspection would take approximately one week to complete. Nighttime maintenance activities are not expected to occur more than once per year.

2.5.3.4 Security

The Orchard Substation physical security would be designed in accordance with North American Electric Reliability Corporation Critical Infrastructure Protection requirements with 24/7 monitoring, response, and control through the Applicant control center and staff. The Project would include a perimeter physical security system consisting of an 8-foot-tall chain link security fence with an additional 1-foot barbed wire extension at the top. The perimeter security fence would have two gates integrated with electronic access card readers. Each gate would be 24 feet wide. Access to the Orchard Substation facility would be restricted by electronic access cards. Access to the control enclosure would be further restricted with monitored entry, an automatic electronic locking mechanism, and a two-factor authentication consisting of an electronic access card and a personal code entered on a keypad. The Orchard Substation design would include indoor and outdoor physical security cameras placed throughout the site with at least two of the cameras placed around the exterior of the control house. The security cameras would be routed through a network video recorder located in the WAN control panel and communicated to the Applicant's control center for monitoring.

Orchard Substation lighting would be photocell controlled and would provide illumination for security. Light fixtures would be located near major outdoor equipment, general substation areas, and building exteriors. Seventy-two-watt LED lights would be mounted on A-frames, H-frames, and shield wire poles, structures, poles, and supplementary buildings as required. The general illumination level within the substation would be two-foot candles. The illumination level for equipment such as disconnect switches, operating mechanisms, and transformer control cabinets would be no less than two-foot candles.

2.5.3.5 Water Use

The Project would not require water sources for O&M activities because the Orchard Substation would be unstaffed. Drinking water would be brought in by the Applicant's personnel during O&M activities.

2.5.3.6 Vegetation Management

In accordance with fire break clearance requirements in PRC 4292 and Title 14, Section 1254 of the CCR, the Applicant would trim or remove flammable vegetation in the area surrounding the Project site, the interconnection transmission lines, and distribution poles to reduce potential fire and other safety hazards. One-person crews typically conduct this work using mechanical equipment consisting of weed trimmers, rakes, shovels, and leaf blowers. The Applicant would typically inspect the Orchard Substation on an annual basis to determine if brush clearing is required.

The PG&E Gates substation is subject to the regulations described above. PG&E actively removes all vegetation from its property, within and outside the established fence-line. The combination of the Applicant's and PG&E's vegetation management activities would ensure a continuous defensible area around both facilities.

2.5.3.7 Future Expansions and Equipment Lifespans

Other than the initial construction of the Project, there is no reasonably foreseeable plan for any future upgrades or expansion at the Project site. The expected usable life of all Project facilities is estimated to be 40 years.

2.5.4 Decommissioning (Orchard Substation Facility)

Prior to removal or abandonment of the facilities, the Applicant would prepare a Removal and Restoration Plan. The Removal and Restoration Plan, subject to CPUC review and approval, would address removal of the Orchard Substation from the permitted area, any requirements for restoration and revegetation, and the potential preparation of the property for future utility uses. Specifically, the Plan would include the following (LSPGC, 2021b):

- Evaluation of the future use of the site;
- An assessment of the extent of surface disturbance that could be required for decommissioning (anticipated to be up to 20 acres)
- Detailed of each step for project decommissioning including erosion and runoff controls, concrete and equipment removal and recycling/reuse activities and site restoration measures.
- Details of pole removal activities, which would include removal of poles and disposal at an approved facility. Where pole bases cannot be removed they would remain in place. Where the pole bases are removed the void would be backfilled with soils from the pole replacement, or with native soil where excess soil is not available. If additional backfill material is required, clean gravel (or other suitable backfill material) would be used to backfill the old pole holes. Excess soil from the new holes would be placed on top of the backfill material.

Following construction, temporarily disturbed areas would be returned as near as possible to original contours and allowed to revegetate naturally. Areas within the Orchard Substation site located adjacent to areas of agricultural use but outside of permanently disturbed areas would be allowed to return to agricultural use, which would also reduce the potential for spread of invasive weeds.

2.5.5 Applicant Proposed Measures

The Applicant proposes to implement certain Project design features referred to as Applicant Proposed Measures (APMs), listed in **Table 2-8**, to avoid or reduce impacts associated with the Project. The APMs are considered part of the Project for the purposes of this CEQA analysis. These Project features are also discussed in the context of the relevant environmental issue area analyses presented in Section 3.2, *Environmental Checklist*.

**TABLE 2-8
APPLICANT PROPOSED MEASURES (ORCHARD SUBSTATION FACILITIES)**

APM Number	Description
APM AES-1	All Orchard Substation Facilities sites would be maintained in a clean and orderly state. Construction staging areas would be sited away from public view where possible. Nighttime lighting would be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, project staging and temporary work areas would be returned to pre-project conditions, including re-grading of the site and re-vegetation or re-paving of disturbed areas to match pre-existing contours and conditions.
APM AES-2	Structures and equipment at the proposed Orchard Substation would be a non-reflective finish and neutral gray color.
APM AGR-1	<p>Prior to commencing construction of the Orchard Substation Facilities, LSPGC must ensure that the Williamson Act contract for the 20-acre portion of the Project site impacted by the Project is:</p> <ul style="list-style-type: none"> • Cancelled pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 5 of the California Government Code; • Determined by Fresno County to be consistent with the Proposed Project; or • Nullified via eminent domain or purchase in lieu of eminent domain pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 6 of the California Government Code
APM AQ-1	<p>The Orchard Substation Facilities portion of the Project would ensure that at least 32 percent of all diesel-powered equipment use (tracked as horse-power hours) during construction year 2022 is from equipment that meet USEPA-certified Tier 4 standards, the highest USEPA-certified tiered emission standards.</p> <p>Prior to the commencement of construction, LSPGC shall develop a diesel-powered equipment use hours tracking tool and procedure. The tracking tool shall be utilized by the Project to keep track of the certified engine tier and daily equipment use hours of all off-road diesel-powered equipment. If all diesel-powered equipment is certified Tier 4, the tracking tool would not be required; however, the Orchard Substation Facilities portion of the Project would be required to verify, record, and track the engine tier of all equipment. The tracking tool shall be maintained by the Project and tracking updates shall be submitted to the CPUC on a monthly basis to track the Project's compliance. Records of the engine tier of all equipment shall be kept onsite and made available to the CPUC upon request.</p>
APM AQ-2	The Orchard Substation Facilities portion of the Project would comply with SJVAPCD Rule 8021 and would prepare and implement a Dust Control Plan for approval by the SJVAPCD Air Pollution Control Officer (APCO). The Dust Control Plan would include specific dust control measures as prescribed within Rule 8021, or as otherwise requested by the APCO. This plan would be submitted and approved prior to construction.
APM AQ-3	The Orchard Substation Facilities portion of the Project would comply with AB 203 and provide Valley Fever Awareness training to all construction workers, inspectors, monitors, and any other project personnel that are required to perform work in or near disturbed soils or dust emissions at the Orchard Substation Facilities site. The Valley Fever Awareness training materials would be prepared by a qualified professional, adapted from agency published trainings (CDPH, CDC, etc.), or otherwise produced by a qualified source. The Valley Fever Awareness training would be incorporated into the Project's overall Worker Environmental Awareness Program (WEAP) training.
APM BIO-1	Speed of vehicles driving along proposed access roads and on the Project site during construction and O&M would be limited to 15 mph. In addition, construction and maintenance employees would be advised that care should be exercised when commuting to and from the Project area to reduce accidents and animal road mortality.
APM BIO-2	Conductors and ground wires would be spaced sufficiently apart so that raptors cannot contact two conductors or one conductor and a ground wire to cause electrocution (APLIC, 2006), subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines.
APM BIO-3	Appropriate methods to reduce the risks of avian collisions would be incorporated into the Project's design (APLIC, 2012), subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines.
APM BIO-4	If feasible, the Applicant would avoid construction during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season, the Applicant would perform a survey in the area where the work is to occur. This survey would be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified, a suitable construction buffer would be implemented to ensure that the nesting or breeding activities are

TABLE 2-8 (CONTINUED)
APPLICANT PROPOSED MEASURES (ORCHARD SUBSTATION FACILITIES)

APM Number	Description
APM BIO-4 (cont.)	not substantially adversely affected. If the nesting or breeding activities are being conducted by a federal- or state-listed species, the Applicant would consult with the USFWS and CDFW as necessary. Monitoring of the nest would continue until the birds have fledged or construction is no longer occurring on the site. If an inactive nest is identified, careful nest removal under the supervision and direction of qualified biologists would occur wherever feasible.
APM BIO-5	If a raptor nest is observed during pre-construction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the Project are disturbing or disrupting nesting or breeding activities, the monitor would make recommendations to reduce noise or disturbance in the vicinity of the nest.
APM BIO-6	All excavated holes or trenches that are not be filled at the end of a workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife species.
APM BIO-7	The use of outdoor lighting during construction and O&M of the Orchard Substation would be minimized whenever practicable.
APM BIO-8	A WEAP would be implemented to educate all construction and O&M workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction or O&M activities.
APM CUL-1	<p>LSPGC would design and implement a Worker Environmental Awareness Program (WEAP) that would be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. The WEAP would be submitted and approved by the CPUC prior to construction. No construction worker would be involved in ground disturbing activities without having participated in the WEAP. The WEAP would include, at a minimum:</p> <ul style="list-style-type: none"> • Training on how to identify potential cultural resources and human remains during the construction process; • A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation; • A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project; • A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and LSPGC policies; and • A statement by the construction company or applicable employer agreeing to abide by the WEAP, LSPGC policies and other applicable laws and regulations. <p>The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist.</p>
APM CUL-2	If proposed facilities and ground-disturbing activities move outside the previously surveyed footprint, those areas would be subjected to a cultural resources inventory to ensure that any newly identified cultural resources are avoided by ground disturbing activities.
APM CUL-3	If subsurface prehistoric or ethnohistoric resources are encountered during construction, archaeological and Native American monitoring is recommended during all excavation associated with the Project. A qualified archaeologist and a member of the Dumna Wo-Wah Tribal Government shall be retained by LSPGC to monitor excavation associated with the Proposed Project to ensure that there is no impact to any significant unanticipated cultural resource. Prior to construction, LSPGC would consult with a designated representative of the Dumna Wo-Wah Tribal Government on the appropriate course of action to be taken should unanticipated cultural materials, and specifically human remains, be discovered during construction.
APM CUL-4	In the event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 100 feet (30 meters) of the discovery would be halted and redirected to another location. LSPGC's qualified archaeologist would inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts would occur, the resource would be documented on State of California Department of Parks and Recreation cultural resource records and no further effort would be required. If the resource cannot be avoided and may be

TABLE 2-8 (CONTINUED)
APPLICANT PROPOSED MEASURES (ORCHARD SUBSTATION FACILITIES)

APM Number	Description
APM CUL-4 (cont.)	subject to further impact, LSPGC would evaluate the significance and CRHR eligibility of the resources and, in consultation with the CPUC, determine appropriate treatment measures. Preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, LSPGC's qualified archaeologist, in consultation with the CPUC and, if the unearthed resource is prehistoric or Native American in nature, the Native American monitor, shall develop additional treatment measures, such as data recovery consistent with CEQA Guidelines 15126.4(b)(3)(C)-(D). Archaeological materials recovered during any investigation shall be curated at an accredited curation facility.
APM CUL-5	Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy where feasible and otherwise managed pursuant to the standards of CEQA Guidelines 15064.5(d) and (e). If human remains are discovered during construction or O&M activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner would contact the NAHC. The NAHC would then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects. No part of the Project is located on federal land.
APM GEO-1	<p>The following measures would be implemented during construction to minimize impacts from geological hazards and disturbance to soils:</p> <ul style="list-style-type: none"> • Keep vehicle and construction equipment within the limits of the Project and in approved construction work areas to reduce disturbance to topsoil; • Prior to grading, salvage topsoil to a depth of six inches or to actual depth if shallower (as identified in site-specific geotechnical investigation report) to avoid mixing of soil horizons; • Avoid construction in areas with saturated soils, whenever practical, to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure; • Keep topsoil material on-site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporary disturbed areas. Temporary disturbance areas would be re-contoured following construction to match pre-construction grades. Areas would be allowed to re-vegetate naturally or would be reseeded with a native seed mix from a local source if necessary. On-site material storage would be sited and managed in accordance with all required permits and approvals; and • Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Removed vegetation would be disposed of off-site to an appropriate licensed facility or can be chipped on-site to be used as mulch during restoration
APM GEO-2	The structural requirements of the CBC are applicable to certain structural components of the Project, including the control enclosures. LSPGC and/or its contractors would design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Supplemental Geotechnical Engineering Report to be prepared and submitted to the CPUC upon completion.
APM PALEO-1	In the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), earthwork within the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.
APM PALEO-2	Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository (e.g., the SDNHM, the University of California Museum of Paleontology) along with associated field notes, photographs, and compiled fossil locality data. Donation of the fossils should be accompanied by financial support for initial specimen curation and storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

TABLE 2-8 (CONTINUED)
APPLICANT PROPOSED MEASURES (ORCHARD SUBSTATION FACILITIES)

APM Number	Description
APM GHG-1	<p>The following measures shall be implemented to minimize greenhouse gas emissions from all construction sites:</p> <ul style="list-style-type: none"> • If suitable park-and-ride facilities are available in the Project vicinity, construction workers shall be encouraged to carpool to the job site. • Demolition debris shall be recycled for reuse to the extent feasible. • The contractor shall use line power instead of diesel generators at all construction sites where line power is available. • The contractor shall maintain construction equipment per manufacturing specifications.
APM HAZ-1	<p>A site-specific SPCCP would be prepared prior to the initiation of construction. In the event of an accidental spill, the Project would be equipped with secondary containment that meets SPCCP Guidelines. The secondary containment would be sufficiently sized to accommodate accidental spills.</p>
APM HAZ-2	<p>A HMMP would be prepared and implemented for the Project. The plan would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan would include the following information related to hazardous materials and waste, as applicable:</p> <ul style="list-style-type: none"> • A list of hazardous materials present on-site during construction and O&M to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements; • A Hazardous Materials Communication (i.e., HAZCOM) Plan; • Assignments and responsibilities of Project health and safety roles; • Standards for any secondary containment and countermeasures required for hazardous materials; • Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Proposed Project area, and disposal protocols; and • Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA trained individual and testing at a certified laboratory. <p>The Project would also be equipped with lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment would be constructed around and under the battery racks, and the HMMP would address containment from a battery leak.</p> <p>The plan would be provided to the CPUC prior to construction for recordkeeping. Plan updates would be made and submitted as needed if construction activities change whereas the existing plan does not adequately address the Project.</p>
APM HAZ-3	<p>In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested, and if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.</p>
APM HAZ-4	<p>LSPGC shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. Although the Proposed Project area is not located within an area designated as a Very High or High Fire Hazard Severity Zone, LSPGC will prepare a Construction Fire Prevention Plan prior to construction.</p> <p>All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to</p>

**TABLE 2-8 (CONTINUED)
APPLICANT PROPOSED MEASURES (ORCHARD SUBSTATION FACILITIES)**

APM Number	Description
APM HAZ-4 (cont.)	<p>initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.</p> <p>Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks, fire extinguishers, and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.</p>
APM WQ-1	<p>Because the Project involves more than an acre of soil disturbance, a SWPPP would be prepared as required by the state NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs. Implementation of the plan would help stabilize disturbed areas and would reduce erosion and sedimentation. The SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:</p> <ul style="list-style-type: none"> • Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas; • Strictly controlling vehicular traffic; • Implementing a dust-control program during construction; • Restricting access to sensitive areas; • Using vehicle mats in wet areas; or • Revegetating disturbed areas, where applicable, following construction. <p>In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.</p>
APM WQ-2	<p>Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following:</p> <ul style="list-style-type: none"> • Recovered groundwater would be contained on site and tested prior to discharge; • If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing); • Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains; • Water unsuitable for land application would be disposed of at an appropriately permitted facility; and • Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE, RWQCB, and/or CDFW, as applicable).

TABLE 2-8 (CONTINUED)
APPLICANT PROPOSED MEASURES (ORCHARD SUBSTATION FACILITIES)

APM Number	Description
APM PS-1	LSPGC would coordinate construction activities with local law enforcement and fire protection agencies. Emergency service providers would be notified of the timing, location, and duration of construction activities.
APM TRA-1	LSPGC would prepare a Traffic Control Plan to describe measures to be taken to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LSPGC would follow its standard safety practices as needed, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LSPGC would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for obtaining a local encroachment permit, LSPGC would establish a Traffic Management Plan (TMP) to address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Construction activities would be coordinated with local law enforcement and fire protection agencies. Emergency service providers would be notified as required by the local permit of the timing, location, and duration of construction activities.
APM UTIL-1	The Applicant shall notify all utility companies with utilities located within or crossing the Orchard Substation Facilities' Rights-of-Way (ROW) to locate and mark existing underground utilities along the entire length of the Orchard Substation Facilities at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.

NOTES:

The APMs are only applicable to the Orchard Substation Facilities portion of the Project unless specified as otherwise applicable to the PG&E Interconnection Facilities.

SOURCE: LSPGC, 2021a

2.5.6 Land Ownership, Right-of-Way Requirements and Easement Applications

The parcel where the Orchard Substation would be constructed (APN 075-060-067S) is under private ownership. The Applicant holds an exclusive option to purchase up to 20 acres of the approximately 230-acre parcel of land. Prior to construction, the Applicant would exercise the option and secure fee title to those 20 acres. All proposed substation related construction would be conducted on LSPGC-owned property after the land would be acquired by the Applicant through the purchase of a portion of a single privately-owned parcel. The Orchard Substation would occur within the 20-acre portion of the parcel and the remaining 210 acres would retain its agricultural use and public access rights. There are no existing easements associated with the Project, and therefore, the Project would not require the replacement, modification, or relocation of existing ROW or easements.

The north-south access road would require an approximately 35-foot wide, 0.56-mile long easement on APN 075-060-665 and a 35-foot-wide, 0.69-mile-long easement (or may be purchased in fee) on APN 075-600-067S, which is the same property that the Orchard Substation would be located on. The granting of the exterior access road easements would not require the

relocation or demolition of commercial or residential property or structures. Use of the easement areas would be restricted to underground telecommunications and access rights only.

2.5.7 Electric and Magnetic Fields Summary (Orchard Substation Facility)

2.5.7.1 Introduction

Extremely low frequency (ELF) electric and magnetic fields (EMF) include alternating current (AC) fields and other electromagnetic, non-ionizing radiation from 1 hertz (Hz) to 300 Hz. Power lines, such as electrical wiring and electrical equipment, produce ELF (fields) at 60 Hz (OSHA, 2021). This CEQA document does not consider EMF in the context of the CEQA analysis of potential environmental impacts because: [1] there is no agreement among scientists that EMF creates a potential health risk, and [2] there are no defined or adopted CEQA standards for defining health risk from EMF. On January 15, 1991, the CPUC initiated an investigation to consider its role in mitigating the health effects, if any, of electric and magnetic fields from utility facilities and power lines. A working group of interested parties, the California EMF Consensus Group, was created by the CPUC to advise on this issue.

The California EMF Consensus Group's fact-finding process was open to the public, and its report incorporated public concerns. Its recommendations were filed with the CPUC in March 1992. Based on the work of the California EMF Consensus Group, written testimony, and evidentiary hearings, CPUC's decision (93-11-013) was issued on November 2, 1993, to address public concern about possible EMF health effects from electric utility facilities. In August 2004, the CPUC opened an Order Instituting Rulemaking to update the Commission's policies and procedures related to EMF emanating from regulated utility facilities. The final decision was issued in D.06-01-042. The conclusions and findings included the following:

“We find that the body of scientific evidence continues to evolve. However, it is recognized that public concern and scientific uncertainty remain regarding the potential health effects of EMF exposure. We do not find it appropriate to adopt any specific numerical standard in association with EMF until we have a firm scientific basis for adopting any particular value.”

This continues to be the position of the CPUC regarding standards for EMF exposure. The State has not determined that any risk would merit adoption of any specific limits or regulations regarding EMF levels from electric power facilities. Presently, there are no applicable federal, state, or local regulations related to EMF levels from power lines or related facilities, such as a Project. However, the CPUC has implemented a decision (D.06-01-042) requiring utilities to incorporate “low-cost” or “no-cost” measures for managing EMF from electrical facilities up to approximately four percent of total project cost. Four percent of total project budgeted cost is the benchmark in developing EMF reduction measure guidelines, and reduction measures should achieve some noticeable reductions.

Recognizing that there is a great deal of public interest and concern regarding potential health effects from human exposure to EMF from power lines and related facilities, this document

provides information regarding EMF associated with electric utility facilities and human health and safety. Thus, the EMF information in this CEQA document is presented for the benefit of the public and decision makers.

2.5.7.2 Field Management Plan Information

The Project is a dynamic reactive device that would have a minimum of two equally sized static synchronous compensator (STATCOM) units. For purposes of preparation of the Field Management Plan (FMP), the Project is equivalent to a substation. Generally, magnetic field values along a substation perimeter are low compared to the substation interior because of the distance to the energized equipment. Normally, the highest values of magnetic fields around the perimeter of a substation are caused by overhead power lines and underground duct banks entering and leaving the substation, and not by substation equipment.

The CPUC adopted EMF Design Guidelines for Electrical Facilities date July 21, 2006, which require preparation of a substation FMP in the form of a checklist for construction of any new substation rated 50 kV or above. The FMP guidelines state that magnetic field modeling for a new substation project is not required (CPUC, 2006). Decision 06-01-042 has determined that low-cost field reduction measures are not required in open areas, such as agricultural areas. Therefore, the checklist prepared by the Applicant evaluates only no-cost field reduction measures. The specific no-cost field reduction measures are described in the Field Management Plan submitted by the Applicant (see Appendix B).

2.6 PG&E Interconnection Facilities

PG&E's Gates Substation would be modified, and interconnection facilities would be constructed to provide the connection for operation of the Orchard Substation. The modifications, including all interconnection facilities, would be constructed and owned by PG&E and are considered part of the Project being reviewed under CEQA, but are not included in the LSPGC Application. Based on the preliminary scope of the PG&E interconnection and Gates Substation modifications, PG&E's interconnection facilities qualify as substation modifications, not upgrades, and would not require permitting or noticing under General Order No. 131-D (GO 131-D). In any case, PG&E would separately comply with GO 131-D.

2.6.1 PG&E Interconnection Facilities Components

PG&E would install two 500 kV high-voltage circuit breakers (HVCBs) in breaker-and-a-half (BAAH) positions within the PG&E Gates Substation. Also, within the Gates Substation PG&E would reassign transformer bank 12's 500 kV BAAH breaker connection using a Gas-Insulated Bus (GIB) and would add a new bus position at Bay #1 and Bay #2, one for each STATCOM unit. New line protective relaying, automation, and telecommunications equipment would be installed inside the 500 kV control building within the PG&E Gates Substation.

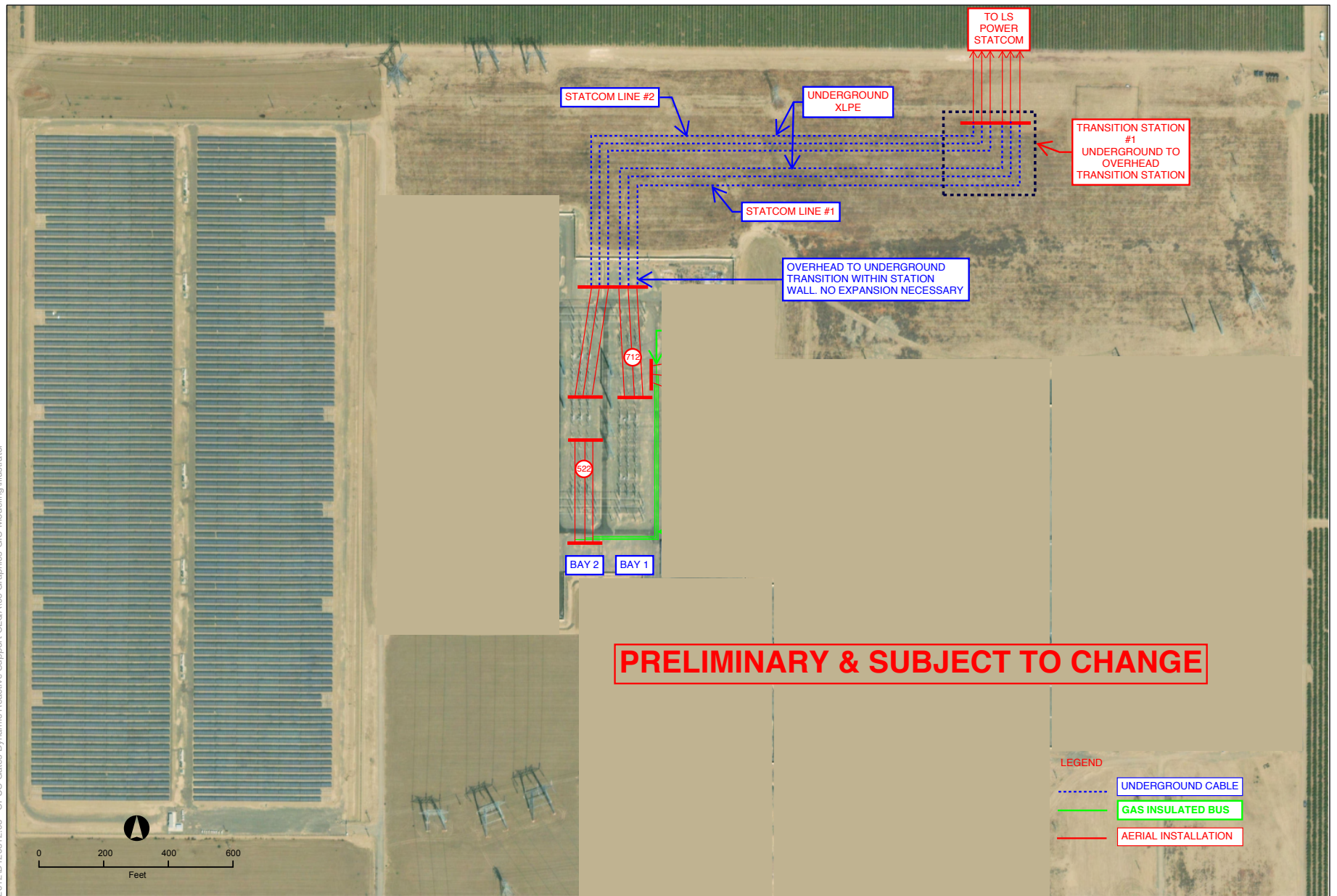
PG&E would also install two 500 kV transmission line circuits from the PG&E Gates Substation to the Orchard Substation. The two new circuits would be installed between each of Bay #1 and Bay #2 of the PG&E Gates Substation 500 kV yard and the future transition station structures on PG&E property (total of approximately 3,500 feet of 500 kV circuit) (**Figure 2-9, Conceptual Layout PG&E Interconnection**). The circuits would likely transition within Gates Substation from overhead to underground cross-linked polyethylene (XLPE) cables to avoid impacting other overhead transmission lines (one 70 kV and two 230 kV lines) and then transition back to overhead circuits extending from the substation property to Orchard Substation's transition station structure (the change of ownership location). The overhead to underground and underground to overhead transition stations would have disconnect switches for each circuit. PG&E would also install redundant underground fiberoptic cable paths in separate trenches between the Orchard and Gates substations. For the interconnection of LSPGC's Dynamic Series Reactor to PG&E's 500 kV system, PG&E would install two 500 kV high-voltage circuit breakers (HVCBs) in breaker-and-a-half (BAAH) positions within the Gates Substation. This would require PG&E to reassign transformer bank 12's 500 kV BAAH breaker connection using the GIB.

Upgrades to the existing PG&E Gates Substation would consist of installation of two 500 kV high-voltage circuit breakers (HVCBs) at the breaker-and-a-half (BAAH) positions at Bays 1 and 2 by opening up the Bay 2 position for one 500 kV circuit to Orchard Substation. Relocation of the existing 500/230 kV Transformer Bank 12's Bay 2 BAAH connection to the other side of Bay 2 would also be needed. This would require replacing the existing overhead connection to Bay 2 with a 500 kV GIB (PG&E, 2021).

Installation of the two approximately 300-foot-long 500 kV single-circuit overhead interconnection transmission lines would connect each of the proposed Orchard Substation STATCOM units to the Gates Substation. The interconnection transmission lines would extend north from the PG&E-owned tubular steel poles or lattice steel towers at the underground to overhead transition station to the Orchard Substation's take-off towers. The LSPGC-owned take-off towers would serve as the point of change of ownership. PG&E would be responsible for the stringing of the 500 kV conductors to the take-off towers.

Two fiber optic communication lines (one for each 500 kV circuit) would also be installed between the Orchard Substation and the Gates Substation. The communication lines would be routed underground or overhead across the PG&E property to the POCO position on the Proposed Project site. PG&E would be responsible for the continuation of the communication lines into their terminal locations within the PG&E Gates Substation.

201210120812.08 - CPUC Gates Dynamic Reactive Support CEQA/05 Graphics-GIS-Modeling/Illustrator



SOURCE: PG&E, 2021

CPUC Gates Dynamic Reactive Support

Figure 2-9
Conceptual Layout PG&E Interconnection



Table 2-9 shows estimates of the structure heights and foundation depths for above and below ground facilities, respectively:

**TABLE 2-9
ESTIMATED ABOVE AND BELOW GROUND COMPONENT DIMENSIONS**

PG&E Interconnection Component	Height (ags)	Foundation/Trench Depth (bgs)
Underground to Overhead and Overhead to Underground Transition Structures (Based off Bank 12 Design)	130 feet	32 feet
High Bus	54 feet	13 feet
Low Bus	29 feet	11 feet
Underground 500 kV Transmission (3,500 feet long)	Below ground	6 feet
Gas Insulated Bus (GIB)	29 feet	20 feet
High Voltage Circuit Breaker (Based off Bank 12 Design)	24 feet	2 feet
High Voltage Motor Operated Disconnect Switch (Based off Bank 12 Design)	29 feet	16 feet
Capacitor Coupled Voltage Transformer (CCVT) (Based off Bank 12 Design)	34 feet	12.5 feet

2.6.2 Construction (PG&E Interconnection Facilities)

At the time this CEQA document was prepared, only preliminary designs were available for the PG&E Gates Substation upgrades/modifications and interconnection facilities. The following section describes the available information and construction assumptions used in this analysis.

2.6.2.1 Site Preparation (PG&E Interconnection)

The PG&E interconnection area is within the PG&E Gates Substation property. The property is devoid of surface vegetation and regularly disked. No vegetation removal would be required for installation of underground transmission facilities, or above ground transmission poles in the areas outside the current Gates Substation boundary wall.

The entire PG&E Gates Substation property (175 acres) including areas both within and outside of the substation boundary wall is considered permanently disturbed. No areas outside of the PG&E Gates Substation property would be temporarily or permanently disturbed associated with construction of the PG&E interconnection facilities.

2.6.2.2 Staging and Work Areas (PG&E Interconnection)

All staging and work areas for the PG&E interconnection facilities would be within the existing Gates Substation property. Some grading may be required.

2.6.2.3 Excavation and Grading (PG&E Interconnection)

The PG&E interconnection would require excavation and grading within the Gates Substation property. The underground installation of 500 kV transmission would require excavation (trenching) of a ditch approximately 3,500 feet long.

2.6.2.4 Access Roads (PG&E Interconnection)

Construction vehicles would access the PG&E interconnection facilities work areas using existing Gates Substation access roads. No new roads or road improvements would be required.

2.6.2.5 Gates Substation Upgrades and Modifications

Preliminary engineering indicates that no wall expansion would be required to accommodate the PG&E interconnection and Gates Substation modifications. If an expansion of the northern existing security wall were needed, it would typically be approximately 12 feet tall, precast, designed similar to Old Castle Precast used for the existing security wall and would take approximately 10 months to complete.

Civil construction would entail installation of new Bays 1 and 2 foundations and transition station structure foundations (32 feet deep) for Bays 1 and 2, and two 500 kV transition structures to overhead conductor.

2.6.2.6 Overhead Transmission Installation (PG&E Interconnection)

To install the two 500 kV transmission line circuits from Gates Substation to Orchard Substation, two transmission line transition stations would be required to connect underground and overhead line spans. The transition stations would have disconnect switches for each circuit.

Approximately 1,000 feet of the 500 kV transmission line would be installed overhead from the 500 kV HVCBs to the overhead/underground transition station north of Bays 1 and 2. Two towers would be installed to transition the 500 kV transmission lines from overhead to underground. See overhead to underground transition station depicted on Figure 2-9.

Approximately 300 feet of the 500 kV transmission line would be installed overhead from the underground/overhead transition station at the northern terminus of the underground 500 kV transmission line to the take-off towers within the Orchard Substation. Two transition station towers would be installed at the northern end of the PG&E Gates Substation property to transition the 500 kV transmission line from underground to overhead. See Transition Station #1 depicted on Figure 2-9.

2.6.2.7 Underground Transmission Installation (PG&E Interconnection)

Approximately 3,500 feet of 500 kV underground transmission lines consisting of XLPE cables would be installed underground in two parallel trenched positions. The underground portion of the STATCOM Lines 1 and 2 would connect to Bays 1 and 2 (respectively) to the Orchard

Substation via the transition stations within the Gates Substation. Installation would take approximately 15 months to complete.

2.6.2.8 Telecommunications

PG&E would also install redundant underground fiberoptic cable paths in separate trenches between Orchard and Gates substations, and new line protective relaying, automation, and telecommunications equipment inside the 500 kV control building.

2.6.2.9 Construction Workforce, Equipment, Trips, and Schedule (PG&E Interconnection)

The construction workforce for the PG&E Interconnection Facilities is expected to require a similar number of personnel and vehicle trips as the construction of the Orchard Substation Facilities. An estimated maximum peak of 112 vehicles per day (46 work trips, 66 truck trips) could be required but is likely to be lower (PG&E, 2020).

Based on previous PG&E Gates Substation projects, the use of traffic control for construction of the interconnection facilities is not anticipated. The existing substation property open spaces and driveways would be adequate to accommodate construction ingress and egress safely.

The PG&E interconnection would consist of phases including civil and electrical construction, testing, and final grade and yard repairs over an anticipated 22-month duration (PG&E, 2021b). A preliminary schedule is provided as follows:

Preliminary Schedule:

- Detailed Scope Approved: September 2021
- Detailed Design: October 2021 through October 2022
- Procurement: February 2022 through March 2023
- Civil Construction Start: January 2023
- Electrical Construction: February 2023 through June 2024
- In Service Date: April 2024
- Final grade and yard repairs: June 2024 through October 2024

2.6.3 Operation and Maintenance (PG&E Interconnection)

The PG&E Gates Substation is a large regularly maintained facility. The Gates Substation upgrades and interconnection facilities related to the Project would not result in a measurable increase in maintenance requirements or the addition of personnel.

2.6.4 Decommissioning (PG&E Interconnection)

It is unknown, whether or not any interconnection facilities would be removed, or left in place following decommissioning of the Orchard Substation.

2.6.5 PG&E Construction Measures (PG&E Interconnection)

No Applicant Proposed Measures (shown above in Table 2-8) would apply to the PG&E Gates Substation upgrades/modifications or interconnection facilities. However, the interconnection would be subject to all applicable regulatory requirements, such as those governing hazardous materials management and water quality protection.

The Project is located within PG&E's San Joaquin Valley Operations and Maintenance Habitat Conservation Plan (SJVHCP) Area. All contractors and subcontractors must complete required HCP training via ENVR-0220WBT to work in the HCP Plan Area. Construction activities must follow SJVHCP General Avoidance and Minimization Measures (AMMs) 1-11 and any additional measures, where identified in this ERTC (Nesting Birds). If biological issues or concerns arise during construction, please contact the project Biologist listed on the ERTC.

The following general (impact) avoidance and minimization measures (AMMs) and Best Management Practices (BMPs) (**Table 2-10**) would be implemented by PG&E as part of the proposed Project.

**TABLE 2-10
AVOIDANCE AND MINIMIZATION MEASURES AND BMPs (PG&E FACILITIES)**

BMP or AMM Number	Description
AMM-1	Train employees and contractors in environmental regulations and guidelines to avoid or reduce effects on covered species.
AMM-2	Park vehicles and equipment on pavement, roads, or previously disturbed areas.
AMM-3	Minimize or avoid new disturbance to the extent practicable.
AMM-4	Do not exceed a speed limit of 15 mph on ROWs or unpaved roads within sensitive land cover types.
AMM-5	Do not dump trash, bring firearms or pets, or have open fires such as barbecues on worksites.
AMM-6	Do not refuel vehicles within 100 ft of a wetland or waterway unless a bermed and lined refueling area is constructed.
AMM-7	In areas of high risk of wildlife electrocution, use insulated jumper wires, animal guards for equipment insulator bushings, or construct lines to follow the Bird and Wildlife Protection Standards.
AMM-8	During fire season in SRAs, carry backpack water sprayers and shovels in all vehicles; during red flag conditions curtail welding, carry a large fire extinguisher on each fuel truck, and clear parking and storage areas of flammable materials.
AMM-9	Implement erosion control measures where necessary to reduce erosion and sedimentation in wetlands or waterways.
AMM-10	If more than 0.25 acre of grassland is disturbed, except in areas with vernal pools or covered plant species, restore to pre-existing conditions using a certified weed-free commercial seed mix.
AMM-11	If elderberry plants with one or more stems 1 inch at ground level are present, establish an exclusion zone of 20 ft. If impacts are unavoidable, follow additional measures in the VELB conservation plan and compliance brochure, which must be in all vehicles working within range of VELB.

TABLE 2-10 (CONTINUED)
AVOIDANCE AND MINIMIZATION MEASURES AND BMPs (PG&E FACILITIES)

BMP or AMM Number	Description
AMM-12	<p>AMM- 12: San Joaquin kit fox. If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided where possible. However, if dens are located within the proposed work area and cannot be avoided during construction, qualified biologists will determine if the dens are occupied. If unoccupied, the qualified biologist will remove these dens by hand excavating them in accordance with USFWS procedures (U.S. Fish and Wildlife Service 1999). Exclusion zones will be implemented following USFWS procedures (U.S. Fish and Wildlife Service 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be as follows: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and DFG. Pipes will be capped and exit ramps will also be installed in these areas to avoid direct mortality.</p>
BMP-1	<p>Nesting Birds. If work is anticipated to occur within the nesting bird season, (February—September), nesting birds, including raptors and other species protected under the Migratory Bird Treaty Act, may be impacted. If active nests are discovered, exclusionary measures and or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. For nests discovered during construction, PG&E implements Work Procedure (WP) 2321 to identify and avoid impacts to nesting birds. WP 2321 generally requires assistance from the project biologist to determine if the construction action will impact the nest, and if so, identify whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E project biologist.</p>
BMP-2	<p>Generation of Spoil- Substation. All spoils generated from within PG&E substations require sampling and shall only be disposed of PG&E approved landfills listed in ERTC Attachment Guide, Section 4, Part 1: ENV-4000P-01-JA15 'Job Aid- PG&E Authorized Disposal & Recycling Facilities'. Spoils from within substations are prohibited from give-away. Copies of all manifests are required to be submitted to the Environmental Lead/Project Environmental Field Specialist (EFS).</p>
BMP-3	<p>BMP-3: Addendum to the Geotechnical Investigation Report. Prior to final design and construction of the PG&E Interconnection Facilities, PG&E would prepare an addendum to the Geotechnical Investigation Report prepared by Kleinfelder, 2015. The addendum would acknowledge and describe Segments GV13 and GV14 of the Great Valley Fault System, and verify that the project design is sufficient to withstand movement and the associated shaking that could occur on the two fault segments.</p>
BMP-4	<p>Asbestos. If any loadbearing structure (poles, towers, concrete pads, etc.) is to be removed, this Project will require asbestos testing and notification to the local Air District or California Air Resource Board (CARB). Notify the Environmental Field Specialist (EFS) at least 45 calendar days prior to work commencing. The Air District must be notified at least 10 working days prior to work (demolition) commencing, some districts require 14 days. If the construction start date changes, notify the EFS immediately as notification to the Air District may need to be resubmitted. EFS is responsible for obtaining any necessary permits from the air district prior to start of work.</p>
BMP-5	<p>Combustion Sources. If project or work involves the installation of a combustion source that may require a local air district permit, please work with the EFS and Air SME to evaluate compliance requirements. Combustion sources, depending on HP or MMBtu rating may require an Authority to Construct Permit prior to any installation activities and a Permit to Operate prior to operating.</p> <p>Typical Combustion Sources that require permits are:</p> <ul style="list-style-type: none"> • Engines ≤50 HP; • Boilers/Heaters that combust natural gas; and • Flares
BMP-6	<p>Fugitive Dust General. Types work activities where water trucks or other dust abatement methods are typically required include: excavation, trenching, grading, sand blasting, and demolition. The crew shall not allow visible dust to pass beyond the project boundary. The crew shall abate dust by:</p> <ul style="list-style-type: none"> • Applying water to disturbed areas and to storage stockpiles; • Applying water in sufficient quantities to prevent dust plumes during activities such as clearing & grubbing, backfilling, trenching and other earth moving activities; • Limit vehicle speed to 15 miles per hour; • Load haul trucks with a freeboard (space between top of truck and load) of six inches or greater; • Cover the top of the haul truck load; • Clean-up track-out at least daily; and

TABLE 2-10 (CONTINUED)
AVOIDANCE AND MINIMIZATION MEASURES AND BMPs (PG&E FACILITIES)

BMP or AMM Number	Description
	<p>The crew shall not generate dust in amounts that create a nuisance to wildlife or people, particularly where sensitive receptors such as schools and hospitals are located nearby or down-wind.</p> <p>During inactive periods (e.g. after normal working hours, weekends, and holidays), the crew shall apply water or other approved material to form a visible crust on the soil and restrict vehicle access.</p>
BMP-7	<p>San Joaquin Valley AQMD >1 acre of soil disturbing activities. A Construction Notification Form must be submitted to the San Joaquin Valley APCD by the Environmental Lead/Project EFS at least 48 hours prior to commencing any earth moving activities.</p>
BMP-8	<p>Hazardous Materials Business Plan. The Environmental Field Specialist (EFS) shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are: 200 cubic feet of compressed gases (1000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 pounds of solids, or 55 gallons of liquids for more than 30 non-consecutive days. The following jurisdictions require notification for any amount of hazardous material/waste:</p> <p>Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only) Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details)</p> <p>NOTE: The Project EFS will develop an HMBP if it is required.</p>
BMP-9	<p>Hazardous Waste Management Hazardous Materials Storage. This project may involve the storage of hazardous materials and they must be managed according to regulations and best management practices.</p> <ul style="list-style-type: none"> • All releases of hazardous materials must be immediately addressed. Maintain a spill kit onsite during the length of the project. Contact the project EFS for spills of hazardous materials/wastes to determine if agency notifications will be required and/or if additional resources are needed. • Hazardous materials, greater than 440 lbs and less than 1001 lbs can be transported on PG&E vehicles if the proper MOT shipping paper/MSDS accompanies the load. Contact the project EFS for additional guidance in these areas. • All hazardous materials containers must be marked correctly. • All hazardous materials signs must be displayed as required. • Non saturated oily rags (to be laundered) stored in non-combustible containers. • Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. on-site. • Hazardous material containers must be in good condition. • All hazardous materials must be compatible with containers. • Hazardous materials containers are kept closed. • If there is an unauthorized release of hazardous material, contact your Environmental Field Specialist immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043. <p>Local EFS Notification</p> <ul style="list-style-type: none"> • Immediately contact the local EFS and stop work if any of the following conditions occur. After hours or if the local EFS is unavailable, please call the Environmental Hotline at 800-874-4043. • Discharge or spill of hazardous substance. <ul style="list-style-type: none"> – If an Environmental Regulator visits the site; – Visually cloudy/muddy water is observed leaving the work area; – An underground storage tank is discovered; or – A subsurface component related to site remediation activities (e.g., monitoring well, recovery well, injection well) is discovered. No subsurface components may be impacted. • If during excavation unanticipated evidence of contamination is identified (e.g., staining, odors), work must cease and when safe to do so, cover the trench with steel plates. In order to minimize impacts to public safety and the environment, place contaminated soil on a polyethylene sheet (4 ml) and cover or place the contaminated soil in lined covered containers. Then contact your local/support EFS to determine the next steps.

TABLE 2-10 (CONTINUED)
AVOIDANCE AND MINIMIZATION MEASURES AND BMPs (PG&E FACILITIES)

BMP or AMM Number	Description
	<ul style="list-style-type: none"> If any subsurface components related to site remediation activities (e.g., monitoring well, recovery well, injection well) are discovered in the path of excavation, work must cease in that location and your EFS must be notified to determine the next steps. No subsurface components may be impacted.
BMP-10	<p>Sulfur Hexafluoride (SF6) Gas Material/Waste Management. Before accessing any equipment that may contain SF6 gas byproduct waste, contact your local Environmental Field Specialist (EFS) at least two weeks in advance for assistance in arranging cleanup, transportation and disposal. PSC will retrieve, package, label and transport SF6 byproducts. All SF6 waste that is removed from a Substation must have proper shipping papers which could include a remote waste shipping paper or a manifest (manifests require a temporary EPA ID number).</p> <ul style="list-style-type: none"> Substation personnel shall contact PSC to retrieve, package, label, and transport SF6 byproduct waste (i.e. fluorides of sulfur, metallic fluorides, etc.). All SF6 byproduct waste that is removed must have proper shipping papers, which could include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA ID number). SF6 cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001. <p>Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF6 in all facilities. ASG provides 24-hour service in response to events involving SF6 as well as delivery and removal of all SF6 cylinders. Contact information: https://www.advancedspecialtygases.com.</p>
BMP-11	<p>SPCC. The local/support EFS shall be notified 30 days prior to an SPCC triggering event occurs (modification to existing or new storage of >1,320 gallons of oil in containers >55 gallons). If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by an engineer. The SPCC containment must be installed prior to moving onsite of quantities requiring containment. The PM number must remain open until the local/support EFS notifies you that the plan is certified by an engineer, and any necessary modifications are complete.</p>
BMP-12	<p>Treated Wood. All new and used treated wood poles shall be managed in accordance with ENV-3000P-07 and stored on horizontal non-treated wood, concrete, or metal support beams raised off the ground to prevent decay and damage. As with any hazardous material, store treated wood away from storm drains.</p>
BMP-13	<p>Treated Wood Waste. All treated wood waste and debris (e.g., poles, cross-arms, saw dust, chips, etc.) shall be transported to the local PG&E or PG&E Contractor approved collection point and placed in designated bins. No poles may be left in place, unless formal authorization is obtained from applicable State and/or Federal agencies or a liability waiver is signed. Please refer to Job Aid ENV-4000P-07.</p>
BMP-14	<p>Stormwater Measures. The Project EFS will provide the Stormwater Group with the following upon completion of the PER: Stormwater Needs Request Form, Soil Disturbance Calculation Spreadsheet, and a KMZ file showing the proposed work area. These documents shall be sent by the Project EFS, via email, to: stormwater@pge.com (if applicable).</p>
BMP-15	<p>Stormwater Management A-ESCPs. Standard PG&E good housekeeping and stockpile management measures shall be implemented.</p>
BMP-16	<p>Small Excavation: Construction Dewatering. Dewatering of trenches or excavations may be required. The Environmental Lead/Project EFS shall be notified at least 30 days in advance to ensure the appropriate dewatering methods are used, proper notifications are made, and, if necessary, applicable authorizations/permits are obtained. All dewatering activities must be coordinated through the Environmental Lead/Project EFS throughout the duration of the project.</p>
BMP-17	<p>Inadvertent Cultural Resource Discovery. If cultural resources are observed during ground-disturbing activities, the following procedures will be followed:</p> <ul style="list-style-type: none"> Stop all ground disturbing work within 100 feet of the discovery location to avoid impacts. Immediately notify a PG&E Cultural Resource Specialist who will assess the discovery. Leave the site or the artifact untouched. Record the location of the resource, the circumstances that led to discovery, and the condition of the resource. Do not publicly reveal the location of the resource and ensure the location is secured. If unsure about the significance or antiquity of a discovery, photograph the artifact or feature with a scale (e.g., coin, tape measure, etc.) and send to a PG&E Cultural Resource Specialist for review

TABLE 2-10 (CONTINUED)
AVOIDANCE AND MINIMIZATION MEASURES AND BMPs (PG&E FACILITIES)

BMP or AMM Number	Description
	Comprehensive guidance on the protocol related to an inadvertent discovery of potentially significant cultural resources on a job site can be found in Utility Standard ENV-8005S or by consulting a PG&E Cultural Resource Specialist
BMP-18	<p>Human Remains Protocol. Section 7050.5 of the California Health and Safety Code (CHSC) states that it is a misdemeanor to knowingly disturb a human burial. In keeping with the provisions provided in 7050.5 CHSC and Public Resource Code 5097.98, if human remains are encountered (or are suspected) during any project-related activity:</p> <ul style="list-style-type: none"> • Stop all work within 100 feet; • Immediately contact a PG&E Cultural Resource Specialist (CRS), who will notify the county coroner; • Secure location, but do not touch or remove remains and associated artifacts; • Do not remove associated spoils or pick through them; • Record the location and keep notes of all calls and events; and • Treat the find as confidential and do not publicly disclose the location. <p>Contact:</p> <ul style="list-style-type: none"> • Upon discovery of cultural resources or suspected human remains, contact the following individual immediately: <p align="center">[CRS Name: <i>Contact to be provided prior to construction</i>]</p>
BMP-19	<p>Bio Survey. A pre-activity survey (PAS) must be performed within 30 days of the construction start date to determine the presence of covered species. Results of the PAS will determine if any additional requirements, including monitoring and species specific AMMs, need to be implemented at these locations during construction. Any identified avoidance measures will be provided to construction crews. Avoidance measures must be adhered to during construction. Contact the PG&E project Biologist at least 30-days prior to start of any project activities, including mobilization and staging of equipment materials.</p>
BMP-20	<p>Worker Awareness Training. Prior to the start of any ground-disturbing activity, PG&E's Cultural Resource Specialist (CRS) shall prepare archeological, historical and paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The CRS shall make the training materials available for review and comment by the Native American group that expressed interest in the project. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the CRS. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of resources that could be encountered within the Project site and the procedures to be followed if they are found. PG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, which documentation shall be made available upon request.</p>
BMP-21	<p>Inadvertent Paleontological Resource Discovery. In the event that a paleontological resource is discovered during ground-disturbing activities, the foreman will temporarily divert the construction equipment around the find until it is assessed for scientific significance. A buffer of at least 50 feet around the discovery will be maintained for safety. The foreman will report the discovery to the site Supervisor and the PG&E point of contact given on the training brochure so that appropriate notifications can be issued. A temporary construction exclusion zone, consisting of lath and flagging tape in a 50-foot radius, will be erected around the discovery. Following fossil collection, the temporary construction exclusion zone will be removed and, once a professional paleontologist has assessed the situation, he/she will notify the site supervisor that construction activities may resume in the area of the find.</p>
BMP-22	<p>Paleontological Resource Monitoring, Salvage, and Treatment Protocols. In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP 21) shall be followed; if significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review before continuing construction activities in the area of the find or as otherwise</p>

TABLE 2-10 (CONTINUED)
AVOIDANCE AND MINIMIZATION MEASURES AND BMPs (PG&E FACILITIES)

BMP or AMM Number	Description
	<p>directed by the qualified paleontologist. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.</p> <ul style="list-style-type: none"> • The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010). • The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion. <p>The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment.</p>

2.6.6 Right-of-Way Requirements or Easement Applications (PG&E Interconnection)

All Project activities related to the PG&E Gates Substation upgrades/modifications and interconnection facilities would occur within the PG&E owned Gates Substation property. No rights-of-way or easements would be required.

2.6.7 Electrical and Magnetic Field Summary (PG&E Interconnection)

No electrical and magnetic field summary would be prepared for the PG&E interconnection facilities.

2.7 Required Approvals

The CPUC is the lead agency for the CEQA review of the Project. The Applicant must comply with the CPUC's General Order 131-D, which contains the permitting requirements for the construction of the Project. In addition to the PTC, the Applicant would obtain approval for the Project from other State and local agencies, as required and outlined in **Table 2-11**.

**TABLE 2-11
ANTICIPATED PERMIT, APPROVAL, AND CONSULTATION REQUIREMENTS**

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
State Agencies		
National Pollutant Discharge Elimination System Permit (NPDES) Construction General Permit	Central Valley Regional Water Quality Control Board (RWQCB)	Stormwater discharges associated with construction activities disturbing more than 1 acre of land.
Permit to Construct (PTC)	California Public Utilities Commission (CPUC)	Overall project approval authority and CEQA review pursuant to General Order 131-D.
Local/Regional Agencies		
Encroachment and Traffic Control Permit	Fresno County	Construction within the public right-of-way, specifically within West Jayne Avenue.
Building and Grading Permits (non-discretionary)	Fresno County	Construction of the control enclosure (building permit) and grading/fill for STATCOM substation pad (grading permit).
Subdivision Map Act	Fresno County	Authorization to subdivide private property.
Williamson Act Review	Fresno County	Construction of project on land subject to a Williamson Act contract.
Rule 8021, Dust Control Plan	San Joaquin Valley Air Pollution Control District (SJVAPD)	Construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site.
Rule 9510, Indirect Source Review	SJVAPCD	Projects exceeding listed square footage thresholds (or 2 tons nitrogen oxides or respirable particulate matter) to submit air impact assessment applications when applying for a final discretionary approval from a public agency.

SOURCE: LSPGC, 2021a.

For the PG&E interconnection and Gates Substation improvements, PG&E would comply with General Order No. 131-D (GO 131-D) separately from the Applicant's Project and does not anticipate a need for permitting or noticing. The Applicant would grant PG&E an easement for the minor section of the 500 kV interconnection lines that would extend beyond the property line into the STATCOM Substation site.

2.8 References

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CHAPTER 3

Environmental Checklist and Discussion

3.1 Aesthetics

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

3.1.1 Environmental Setting

For the purpose of this analysis, visual or aesthetic resources are defined as both the natural and built features of the landscape that contribute to a public viewer’s experience and appreciation of a given environment. Definitions of the following terms and concepts are provided in order to aid the readers’ understanding of the content in this section.

Visual Quality is defined as the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area. For the purposes of this analysis, visual quality is defined according to three levels:

- *Indistinctive, or industrial:* generally lacking in natural or cultural visual resource amenities typical of the region
- *Representative:* typical or characteristic of the region’s natural and/or cultural visual amenities

- *Distinctive*: unique or exemplary of the region's natural or cultural scenic amenities

Viewer Exposure addresses the variables that affect viewing conditions from potentially sensitive areas. Viewer exposure considers the following factors:

- *Landscape visibility* (i.e., the ability to see the landscape)
- *Viewing distance* (i.e., the proximity of viewers to the Project)
- *Viewing angle* – whether the Project would be viewed from above (superior), below (inferior) or from a level line of sight (normal)
- *Extent of visibility* – whether the line of sight is open and panoramic to the Project area or restricted by terrain, vegetation and/or structures
- *Duration of view*

Viewer Types and Volumes of use pertain to the types of use (e.g., public viewers including recreationalist and motorist) and amounts of use (e.g., number of recreational users or motorists) that various land uses are associated with. Generally, recreational users tend to be relatively more concerned with scenery and landscape character; whereas people who commute through a landscape daily to work tend to have a lower concern for visual, or scenic quality.

Visual Sensitivity is the overall measure of an existing landscape's susceptibility to adverse visual changes. People in different visual settings, typically characterized by different land uses surrounding a project, have varying degrees of sensitivity to changes in visual conditions depending on the overall visual characteristics of the place. In areas of more distinctive visual quality, such as designated scenic highways, designated scenic roads, parks, and recreational and/or natural areas, visual sensitivity is characteristically more pronounced. In areas of more indistinctive or representative visual quality, sensitivity to change tends to be less pronounced, depending on the level of visual exposure. This analysis of visual sensitivity is based on the combined factors of visual quality, viewer types and volumes, and visual exposure to the Project. Visual sensitivity is reflected according to high, moderate, and low visual sensitivity ranges.

Definitions for the following terms also are provided as they are used to describe and assess the aesthetic setting and impacts from the Project.

Color is the property of reflecting light of a particular intensity and wavelength (or mixture of wavelengths) to which the eye is sensitive. It is the major visual property of surfaces.

Contrast is the opposition or unlikeness of different forms, lines, colors, or textures in a landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape.

Form is the mass or shape of an object or objects which appear unified.

A **Key Observation Point (KOP)** is a point on a travel route or at a use area or a potential use area, where the view of a proposed activity would be most revealing. For the purposes of the following analysis, KOPs describe locations from which setting photographs were taken. KOPs for this Project are shown in **Figure 3.1-1, Map of Representative Viewpoints**.

Landscape character is the arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality that distinguishes it from its immediate surroundings.

Line is the path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture. Within landscapes, lines may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches.

Scenic vista is an area that is designated, signed, and accessible to the public for the purposes of viewing and sightseeing.

A **scenic highway** is any stretch of public roadway that is designated as a scenic corridor by a federal, state, or local agency.

Sensitive receptors or sensitive viewpoints include individuals or groups of individuals that have views of a site afforded by a scenic vista, scenic highway, residence, or public recreation area.

Texture is the visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.

The **viewshed** for a project is the surrounding geographic area from which a project is likely to be seen, based on topography, atmospheric conditions, land use patterns, and roadway orientations.

Existing Visual Quality of the Region

The Project site is located in Fresno County within the central San Joaquin Valley, approximately 15 miles southeast of the base of the Diablo (portion of the California Coast Mountain) Range. The San Joaquin Valley, extends from the Sacramento-San Joaquin River Delta in the north to the Tehachapi Mountains in the south, and is framed by the California Coast Range mountains to the west and the Sierra Nevada mountains to the east. The San Joaquin Valley is dominated by agricultural land use with views of industrial-scale farms and orchards interspersed with small communities. The closest town is Huron, 4 miles to the north; the City of Coalinga is 12 miles west of the Project site and Kettleman City 13 miles south. Interstate 5 (I-5) bisects the valley (north to south) and is located approximately 2 miles west of the Project site. The valley is a low-elevation flatland basin that has been altered to support agriculture. Rivers in the region, such as the San Joaquin River and the Kings River have been greatly altered over time and now support the larger regional water conveyance system created for agricultural use. The topography is relatively flat, but elevations gradually rise towards the east, south, and west. The topographic

characteristics of the Project site and surrounding region allow for open, expansive views of hills and mountains around the valley.

A map depicting representative viewpoints is provided as **Figure 3.1-1**. Representative views of the Project vicinity from key observation points (KOPs) are provided as **Figures 3.1-2 through 3.1-7**.

Scenic Roadways

The major north-south route in the region is I-5, a four-lane divided interstate highway located approximately 2 miles west of the Project site. I-5 is recognized as a scenic highway by Fresno County (Fresno County 2000). Other than I-5, there are no designated state scenic highways or County scenic highways within the study area (Caltrans 2020a, 2020b; Fresno County 2000). The closest designated state scenic highway is a segment of State Route (SR) 180 east of Fresno, more than 50 miles east of the site.

Scenic Vistas

There are no designated scenic vistas in the vicinity of the Project.

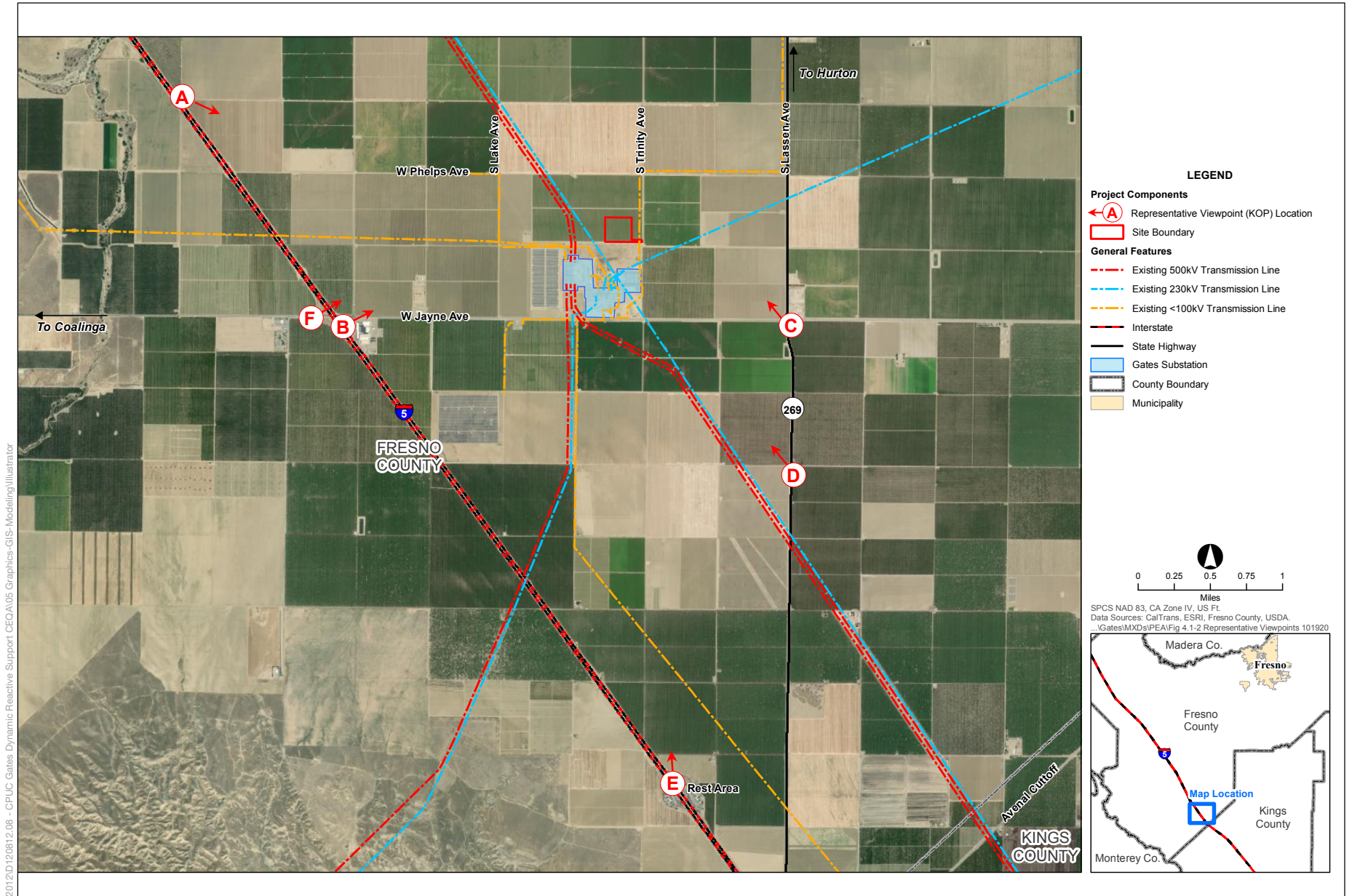
Scenic Character

The overall visual or scenic character of the Project site and surroundings includes a combination of agricultural and industrial elements. The mix of rural agricultural views along with views of existing solar facilities, substation infrastructure, as well as electrical transmission and distribution lines in the Project vicinity can be described as representative visible elements in the region. The generally rural landscape is dominated by open agricultural views interspersed with more industrial and developed elements, notably including: existing solar facilities and power lines, machinery, buildings and structures associated with residential and agricultural operations.

Viewer Types and Exposures

Public viewer groups evaluated for this analysis include motorists along major or scenic roadways, visitors to parks and recreational areas, and visitors to scenic vistas. For each viewer group analyzed, viewer exposure conditions were evaluated based on traffic information along local roadways, as described in Section 3.17, *Transportation*.

Variables considered include the angle of view, the extent to which views are open or screened, the duration of view, and viewing distance. Viewing angle and extent of visibility consider the relative location of the Project site to the viewer and whether visibility would be open or panoramic, or limited by intervening elements, such as vegetation, structures, or terrain. Duration of view pertains to the amount of time a subject would typically be seen from an observational point. In general, the duration of view is shorter where a subject would be seen for brief or an intermittent period (such as from major travel routes and recreation destination roads) and greater in instances where the subject would be seen regularly and repeatedly viewed (such as from public use areas). Viewing distances are described according to whether the subject would be viewed within a foreground (within 0.5-mile), middle ground (0.5-mile to 2 miles), or background (beyond 2 miles) zone.



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SOURCE: LSPGC, 2021

CPUC Gates Dynamic Reactive Support

Figure 3.1-1
Map of Representative Viewpoints





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Existing View - I-5 Looking Southeast

SOURCE: LSPGC, 2021

CPUC Gates Dynamic Reactive Support

Refer to Figure 3.1-1 for photograph viewpoint locations.

Figure 3.1-2
KOP-A

Representative Photograph



2012/01/20 12:08:12.08 - CPUC Gates Dynamic Reactive Support CEQA/05 Graphics-GIS-Modeling/Illustrator



Existing View - I-5 and West Jayne Ave Intersection Looking East

SOURCE: LSPGC, 2021

CPUC Gates Dynamic Reactive Support

Refer to Figure 3.1-1 for photograph viewpoint locations.

Figure 3.1-3

KOP-B

Representative Photograph





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Existing View - Lassen Ave and West Jayne Ave Intersection Looking Northwest

SOURCE: LSPGC, 2021

Refer to Figure 3.1-1 for photograph viewpoint locations.

CPUC Gates Dynamic Reactive Support

Figure 3.1-4

KOP-C

Representative Photograph





Existing View - Lassen Ave Looking Northwest

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SOURCE: LSPGC, 2021

Refer to Figure 3.1-1 for photograph viewpoint locations.

CPUC Gates Dynamic Reactive Support

Figure 3.1-5

KOP-D

Representative Photograph



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Existing View - Interstate 5 Rest Area Looking North

SOURCE: LSPGC, 2021

Refer to Figure 3.1-1 for photograph viewpoint locations.

CPUC Gates Dynamic Reactive Support

Figure 3.1-6

KOP-E

Representative Photograph



2012\0120812.08 - CPUC Gates Dynamic Reactive Support CEQA\05 Graphics-GIS-Modeling\Illustrator



Existing View - West Jayne Ave West of Interstate 5 Looking Northeast

SOURCE: LSPGC, 2021

Refer to Figure 3.1-1 for photograph viewpoint locations.

CPUC Gates Dynamic Reactive Support

Figure 3.1-7

KOP-F

Representative Photograph



Scenic Vistas

The Fresno County General Plan was reviewed to identify any officially designated scenic vistas. There are no designated scenic vistas in the Project vicinity. Additionally, Google Earth was used to search for any natural, elevated scenic vistas near the Project site. Due to the flat nature of the Project vicinity and region, there are no unique, elevated areas where high-quality views would be available within the vicinity of the Project site.

3.1.2 Regulatory Setting

Federal

No federal regulations are applicable to the Project regarding visual resources.

State

California Department of Transportation Scenic Highway Program

The California Department of Transportation (Caltrans) manages the State Scenic Highway Program and provides guidance to local governments, community organizations, and citizens pursuing official designation of a State Scenic Highway. The Scenic Highway Program was introduced by the State Legislature in 1963 and established through SB 1467, which added Sections 260 through 263 to the State Highways Code. In these statutes the State establishes the State's responsibility for the protection and enhancement of California's natural scenic beauty by identifying those portions of the State Highway system which, together with adjacent scenic corridors, require special conservation treatment. Scenic Corridors consist of land visible from, adjacent to, and outside the highway right-of-way, and is comprised primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional boundaries determine the corridor boundaries (Caltrans 2021).

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B, "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 1995). A summary of local policies, and County goals is provided for informational purposes.

County of Fresno

Fresno County General Plan

The Open Space and Conservation Element of the Fresno County General Plan evaluates the scenic resources of Fresno County and provides policies intended to protect the County's scenic resources and ensure that development enhances those resources through various measures

including identification, development review, acquisition, and other methods (Fresno County 2000). According to this element, the Project site has not been identified as a scenic resource.

The Fresno County General Plan also includes policies intended to protect scenic resources along roadways of the County by identifying, developing, and maintaining scenic amenities along County roads and highways and ensuring that development enhances those resources. According to Policy OS-L.1, Fresno County has designated a system of scenic roadways that includes landscaped drives, scenic drives, and scenic highways. According to this element, the only designated scenic roadway in the vicinity of the Project site is I-5, which is designated as a scenic highway. Figure 3.1-1 shows I-5 in relation to the Project site. There are no other scenic resources or vistas identified in the General Plan.

The policies in the Fresno County General Plan for scenic resources relevant to the Project are provided below.

Policy K. Scenic Resources

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

Policy OS-K.1: The County shall encourage the preservation of outstanding scenic views, panoramas, and vistas wherever possible. Methods to achieve this may include encouraging private property owners to enter into open space easements for designated scenic areas.

Policy OS-K.4: The County should require development adjacent to scenic areas, vistas, and roadways to incorporate natural features of the site and be developed to minimize impacts to the scenic qualities of the site.

Policy L. Scenic Roadways

Goal OS-L: To conserve, protect, and maintain the scenic quality of land and landscape adjacent to scenic roads in Fresno County.

Policy OS-L.1: The County designates a system of scenic roadways that includes landscaped drives, scenic drives, and scenic highways.

Policy OS-L.3: The County shall manage the use of land adjacent to scenic drives and scenic highways based on the following principles: ... b. Proposed high voltage overhead transmission lines, transmission line towers, and cell towers shall be routed and placed to minimize detrimental effects on scenic amenities visible from the right-of-way.

City of Huron

2025 General Plan

Policy 6.34: Industrial development should not create significant off-site circulation, noise, dust, odor, visual or hazardous materials impacts that cannot be adequately mitigated (City of Huron, 2014).

3.1.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following Project design features or applicant proposed measures (APMs) have been identified by the Applicant to reduce potential visual and aesthetic impacts associated with the Project:

- **APM AE-1:** All Orchard Substation Facilities sites would be maintained in a clean and orderly state. Construction staging areas would be sited away from public view where possible. Nighttime lighting would be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, project staging and temporary work areas would be returned to pre-project conditions, including re-grading of the site and re-vegetation or re-paving of disturbed areas to match pre-existing contours and conditions.
- **APM AE-2:** Structures and equipment at the proposed Orchard Substation would be a non-reflective finish and neutral gray color.

PG&E Construction Measures

No PG&E construction measures (avoidance and minimization measures or best management practices) have been identified to reduce potential visual and aesthetic impacts associated with the PG&E Interconnection Facilities.

3.1.4 Environmental Impacts

Visual Impact Assessment Methodology and Assumptions

The methodology utilized in this analysis is adapted from an approach to visual impact assessment developed by the U.S. Department of Transportation/Federal Highway Administration (DOT, 2015). This analysis also considers the APMs that have been incorporated as Project design features to avoid or minimize visual resources impacts.

An adverse visual impact may occur when: (1) an action perceptibly changes the existing physical features of the landscape that are characteristic of the region or locale; (2) an action introduces new features to the physical landscape that are perceptibly uncharacteristic of the region or locale, or become visually dominant in the viewshed; or (3) an action blocks or totally obscures aesthetic features of the landscape. The degree of visual impact depends on the noticeability of the adverse change. The noticeability of a visual impact is a function of a project's features, context, and viewing conditions (angle of view, distance, and primary viewing directions). The key factors in determining the degree of visual change are visual contrast, project dominance, and visual screening. The interaction of visual change with the components of visual sensitivity (visual quality, viewer types and volumes, and viewer exposure; see *Environmental Setting*) is discussed below under "Overall Adverse Visual Impact."

Visual Contrast

Visual contrast is a measure of the degree of change in line, form, color, and texture that a project would create, when compared to the existing landscape. Visual contrast ranges from “none” to “strong”, and may be characterized as:

- **None** –The element contrast is not visible or perceived;
- **Weak** –The element contrast can be seen but does not attract attention;
- **Moderate** –The element contrast begins to attract attention and begins to dominate the characteristic landscape; and
- **Strong** – The element contrast demands the viewer’s attention and cannot be overlooked.

Project Visual Dominance

Project visual dominance is a measure of the apparent size of a project component relative to other visible landscape features in the viewshed, or seen area. The visual dominance of a component is affected by its relative location in the viewshed and the distance between the viewer and the project component.

Visual Screening

View blockage or impairment is a measure of the degree to which a project would obstruct or block views to aesthetic features due to its position and/or scale. Blockage of aesthetic landscape features or views can cause adverse visual impacts, particularly in instances where scenic or view orientations are important to the use, value, or function of the land use.

Overall Adverse Visual Impact

Overall adverse visual impact reflects the composite visual changes to both the directly affected landscape and from sensitive viewing locations. The visual impact levels referenced in this analysis indicate the relative degree of overall change to the visual environment that the Proposed Project would create, considering visual sensitivity, visual contrast, view blockage, and project visual dominance.

In general, the determination of impact significance is based on combined factors of Visual Sensitivity and the degree of Visual Change that the Project would cause. **Table 3.1-1, *Guidelines for Determining Adverse Visual Impact Significance***, shows how the inter-relationship of these two overall factors determines whether adverse visual impacts are significant, and following the table are descriptions of the various impact classifications for aesthetics.

**TABLE 3.1-1
 GUIDELINES FOR DETERMINING ADVERSE VISUAL IMPACT SIGNIFICANCE**

Overall Visual Sensitivity	Overall Visual Change				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	No Impact	No Impact	Less than Significant	Less than Significant	Less than Significant
Low to Moderate	No Impact	Less than Significant	Less than Significant	Less than Significant	Less than Significant
Moderate	Less than Significant	Less than Significant	Less than Significant	Potentially Significant	Potentially Significant
Moderate to High	Less than Significant	Less than Significant	Potentially Significant	Potentially Significant	Significant
High	Less than Significant	Potentially Significant	Potentially Significant	Significant	Significant

DEFINITIONS

- **No Impact.** Effects may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.
- **Less than Significant.** Impacts are perceived as negative but do not exceed environmental thresholds.
- **Potentially Significant.** Impacts are perceived as negative and may exceed environmental thresholds depending on project- and site-specific circumstances.
- **Significant Impacts.** Impacts with feasible mitigation may be reduced to less-than-significant levels or avoided altogether. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.

SOURCE: ESA, modified from U.S. Department of Transportation/ Federal Highway Administration (DOT, 2015).

KOP Selection and Location:

The Key Observation Points (KOPs) selected for the Project’s analysis are summarized in **Table 3.1-2** below, and depicted in Figures 3.1-2 through 3.1-7.

**TABLE 3.1-2
 SUMMARY OF VIEWPOINTS, PRIMARY VIEWERS, DIRECTION OF VIEW AND DESCRIPTION**

View: Key Observation Point (KOP)	Potentially Affected Viewers	Direction of View	Description
KOP A (Figure 3-2)	Southbound I-5 motorists	southeast	I-5, active travel lanes
KOP B (Figure 3-3)	Motorists stopped at the intersection	east	I-5 and West Jayne Ave. intersection; existing Gates substation in background view
KOP C (Figure 3-4)	Motorists stopped at the intersection	northwest	Lassen and West Jayne Ave. intersection; existing powerlines are visible in foreground; Gates substation is visible in background view
KOP D (Figure 3-5)	Motorists traveling along Lassen Ave. (SR 269).	northwest	Lassen Ave.; existing agricultural orchard in foreground
KOP E (Figure 3-6)	Travelers stopped at the rest area on I-5	north	I-5 rest area; existing fence in foreground, open agricultural field in middle ground view; Gates substation distantly visible in background view
KOP F (Figure 3-7)	Travelers approaching I-5 from Coalinga along West Jayne Ave	west	I-5 in the foreground; agricultural fields in middle ground view; existing PG&E Gates substation and transmission lines in background view.

Direct and Indirect Effects

a) Have a substantial adverse effect on a scenic vista: *No Impact.*

Although there are no scenic vistas in the vicinity of the Project, I-5 is a Fresno County (locally designated) scenic highway, and there are scenic views available to motorists travelling along this route.

KOP E: Represents a view looking north toward the Project site from northbound I-5 (Fresno County designated scenic highway), near Coalinga/Avenal Northbound Rest Area. As depicted in the representative photograph from KOP E, working agricultural landscapes are evident in the foreground view from the rest area. Viewers from this vantage point at a rest area would be presumed to be standing or sitting, with a moderate to high visual sensitivity and a potentially prolonged duration of view while observing the landscape from such a vantage point. The existing PG&E substation and transmission lines are distantly viewable in the background when looking north from the rest area (Figure 3.1-6, KOP E). Because the proposed elements associated with the Orchard Substation would be located beyond the viewable distance from the rest area, the Project would have no impact from this viewpoint which would visually alter the predominantly agricultural landscape. The proposed PG&E infrastructure upgrades would be installed within or to the north of existing (Gates Substation) facilities and/or in a subsurface position. Therefore, there would be no impact posed by the Project pertaining to a scenic vista, as viewed from the rest area.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway: *No Impact.*

There are no designated California State scenic highways near the Project site. The portion of SR 180 from the eastern edge of Fresno to Cedar Grove in Kings Canyon National Park is Fresno County's only officially designated state scenic highway. This portion of SR 180 is located at a distance of more than 50 miles from the Project site. The California Scenic Highway Mapping System identifies four highway segments that are potentially eligible for future designation as scenic highways (DOT 2021a; DOT 2021b). The Project site is not located within the viewshed of any of these eligible segments.

Although not designated as a state scenic highway, I-5 is designated in the Fresno County General Plan as a scenic highway. The Project would be viewable from I-5; however, there would be no damage to trees, rock outcroppings or historic buildings in the viewshed of this corridor.

The Project would include the addition of transmission lines, poles, transformers, towers, and other structures, such elements would not damage scenic resources; nor would these structures be visible from a state designated scenic highway. Therefore, there would be no impact.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings; or if in an urbanized area, whether the Project would conflict with applicable zoning and other regulations governing scenic quality: *Less than Significant.*

CEQA Guidelines Appendix G Section I suggests, “In non-urbanized areas,” a project would have a significant effect on the environment if it would “substantially degrade the existing visual character or quality of public views of the site and its surroundings.” Public views are defined for purposes of this evaluation as “those that are experienced from publicly accessible vantage point.” A different consideration is suggested if a project would be located in an urbanized area. The Project is not proposed to be located in an area that meets the CEQA definition of “urbanized” (Pub. Res. Code §21071¹). The closest city to the study area is Huron, which has a population of 5,700 people. Therefore, the analysis below focuses on the potential for the Project or an alternative to substantially degrade the existing visual character or quality of public views of the site and surroundings.

Construction and Decommissioning

Construction would introduce a level of activity and visual change to the Project site associated with construction activities and the presence of construction equipment. As described in the Environmental Setting, the existing visual character of the Project site is characterized as a combination of agricultural and industrial. Construction of the Project would involve earthwork, grading, and the construction, erection, and installation of facility equipment and infrastructure. These activities would require the presence and movement of delivery trucks, vehicles, and construction equipment. Additionally, construction activities would require the use of storage, staging, and active work areas. More details regarding specific activities and equipment required are provided in Section 2.7, *Construction*. The construction period is anticipated to last approximately 22 months (including commissioning and testing); accordingly, all activities associated with construction would be temporary.

Construction and decommissioning of the Project would involve the presence (and use of) large equipment and materials, which would have a temporary impact on the visual character of the site. During the construction and decommissioning phases of the Project, the quality of public views of site and surroundings would be diminished by the presence of equipment, dust and other emissions, which could reduce the quality of views. However, such impacts (discussed in more detail in Section 3.3, *Air Quality*) would not persist beyond the period of construction or decommissioning. Following decommissioning activities temporarily disturbed areas would be returned as near as possible to pre-construction contours, allowed to revegetate, and return to agricultural use. Structures such as poles (and presumably other above-ground structures) would be removed from the site and the site would be restored. Therefore, construction and decommissioning activities would have a less-than-significant impact on the visual quality of public views.

¹ California Public Resources Code §21071 defines “urbanized area” as an incorporated city with a population of at least 100,000 persons or a combined population of 100,000 persons, if two contiguous incorporated cities are present.

Operation and Maintenance

As previously noted in this section, the Project would be located in a non-urbanized area with existing industrial elements, including the existing transmission lines and existing facilities of the PG&E Gates Substation, within the viewshed of motorists travelling along I-5 and SR 269. This analysis focuses on potential effects associated with the addition of Project structures that could impact the public's experience of this locally-designated scenic route. KOPs A and B were selected because the I-5 within Fresno County is a County-designated scenic highway. As noted in the setting, scenic highways cross land considered to have unique or outstanding scenic quality or provide access to significantly scenic or recreational areas. Goal LU-D, from the Fresno General Plan, indicates an intention to protect scenic views along I-5.

KOP A (Figure 3.1-2) is a representative view from I-5 (looking to the east toward the Project site) that a typical traveler might enjoy. As demonstrated in the view, industrial elements such as the existing PG&E Gates Substation and high voltage transmission lines and associated structures are visible from this angle under existing conditions.

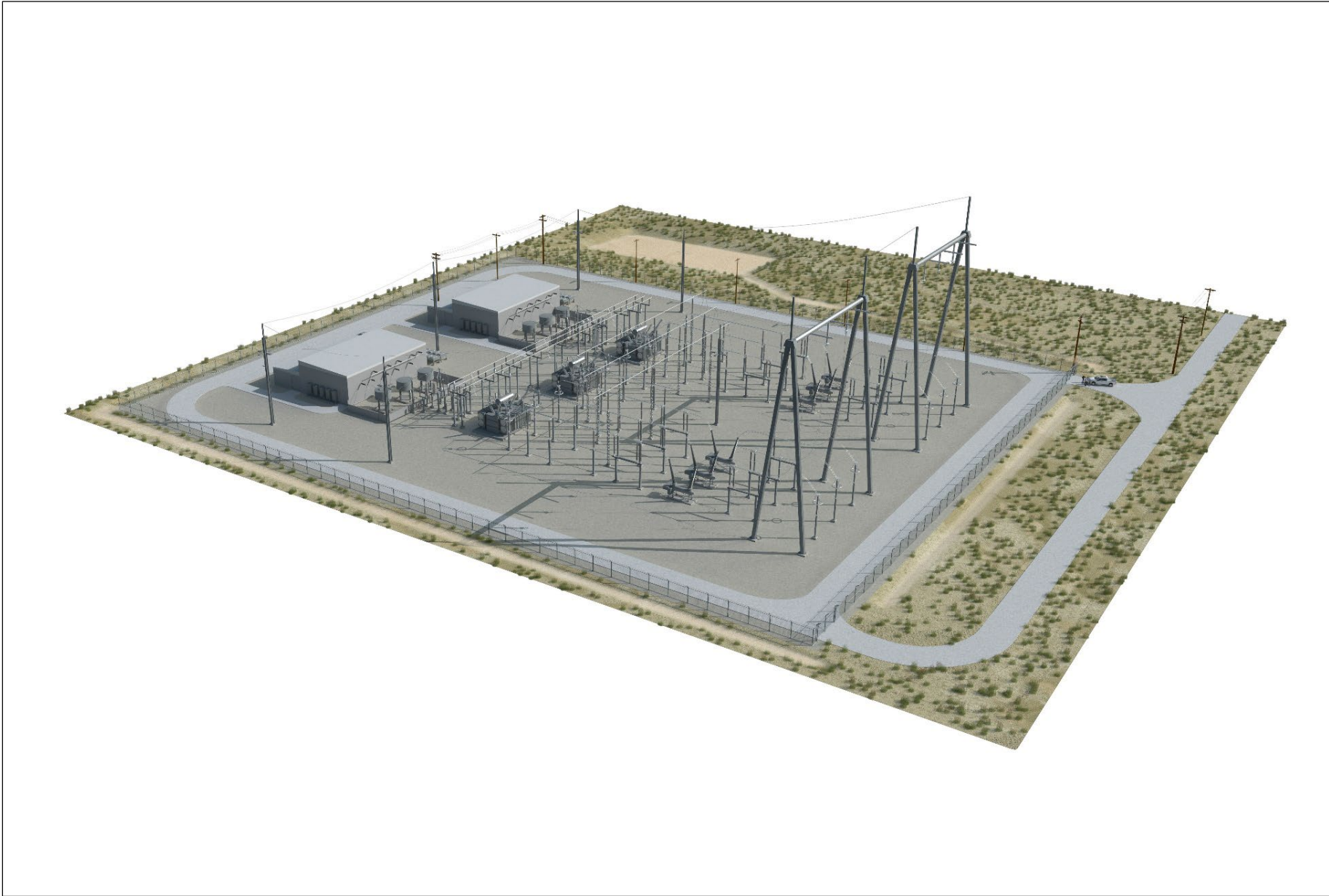
KOP B (Figure 3.1-3) represents a view facing east toward the Project site from southbound I-5 (Fresno County designated scenic highway). The roadway of West Jayne Avenue is in the foreground, with I-5 and agricultural fields in the middle ground view and the existing PG&E Gates substation and transmission lines in the background. The Project would add industrial elements to the background along the horizon from this viewpoint (see **Figure 3.1-8** for a visual rendering of the Orchard Substation). Motorists along I-5 could reasonably be assumed to be traveling at speeds of 60-80 miles per hour along this route. Therefore, the duration of view (or visual exposure) would be brief, and visual sensitivity for these receptors would be low.

There are other views enjoyed by travelers along local roads which could be considered scenic. As motorists tend to travel at a slower pace on local roadways, the visual elements would appear more pronounced, with a slightly extended duration of view (as compared to fleeting views experienced by motorists traveling on the interstate). Visual sensitivity for motorists traveling at lower speeds along major local routes (such as SR 269) would be considered moderate.

KOP C: Represents a view looking west toward the Project site from the intersection of West Jayne Avenue and South Lassen Avenue (SR 269) looking west with the Coastal Range in the background of this view. The proposed Project would add industrial elements to the middle ground of this view, such as the (up to) 199-foot tall STATCOM towers (Figure 3.1-8, Orchard Substation Rendering). The Project's structures (including proposed PG&E infrastructure) would add to the industrial elements from this viewpoint. However, Project structures would be similar in form and would resemble the existing PG&E Gates substation structures (visible in the left side in the background view in representative photograph: KOP C).

KOP D: Represents a view looking northwest toward the Project site as viewed from South Lassen Avenue (SR 269) a thoroughfare used by motorists travelling between I-5 and Huron. From KOP D, an orchard is the intervening foreground view with no visible structures in the background. The proposed Project could alter that view to some extent, through the addition of industrial elements into the predominantly agricultural visual landscape. However, such effects

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SOURCE: LSPGC, 2021

CPUC Gates Dynamic Reactive Support

Figure 3.1-8
Proposed Orchard Substation Visual Rendering



would not be considered significant as SR 269 is not a scenic vista, providing any unique qualities.

KOP F Represents a view approaching I-5 from Coalinga along West Jayne Avenue. Open land with a view of I-5 in the foreground; agricultural fields in the middle ground; and existing distant views of the PG&E Gates Substation and associated infrastructure can be seen in the background. As with the other viewpoints, the Project would add industrial elements into the view for motorists traveling from Coalinga to I-5. The addition of the Project's Orchard Substation and proposed PG&E interconnection infrastructure would not present a significant change to the existing visual landscape because the proposed structures resemble existing Gates Substation and transmission lines (visible in the background of Figure 3.1-7).

Public views of the site are experienced by travelers with a low to moderate visual sensitivity to features in the background view (while traveling on I-5 at high speeds) or with moderate sensitivity (while traveling along other major roadways at lower speeds in the study area). Following construction, the Project would add major industrial elements to the visual landscape, which could be viewed by motorists with low to moderate visual sensitivity. However, given that proposed structures are visually similar to existing structures and proposed in a location proximal to an existing substation, the overall visual change would be moderate (refer to Guidelines, Table 3.1-2).

In summary, although the proposed Project would add elements to the views enjoyed by travelers, such additions would not be appreciably different or more extreme (in a visual respect) compared to existing structures; therefore, the Project would have a moderate overall effect for the public views. Impacts would be less than significant.

Proposed PG&E interconnection infrastructure would consist of modifications (additional gas insulated bus and aerial installations) within the existing Gates Substation, a transition station to connect to the proposed Orchard Substation, and two parallel underground fiber optic cable lines. Because the proposed PG&E interconnections and facility upgrades would be located adjacent to existing infrastructure which is similar in form to what is proposed (or in a subsurface position), the overall effect would also be considered moderate. Impacts associated with the PG&E interconnection and associated upgrades to the Gates Substation would have a less-than-significant impact with respect to visual resources.

d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area: *Less than Significant.*

The nearest receptor to the Project site is a residence located 1.5 miles northeast of the site. No other residences located within 2 miles of the site have been identified. Because the Project would be located in a very sparsely populated non-urban area, a change in lighting conditions could potentially have a significant effect as it pertains to existing dark skies during the nighttime if lighting was proposed that could dramatically alter existing dark skies for this receptor. However, as described in Chapter 2, *Project Description*, the Project would incorporate design features described in APM AES-1 to minimize light pollution. Per APM AES-1, nighttime lighting at the Orchard Substation would be directed away from residential areas and be shielded to prevent light

spillover effects. Per APM AES-2, structures and equipment would be a non-reflective finish and neutral gray color, which would minimize conditions of glare and allow the Project substation facilities to blend into the landscape. With the implementation of the design features described in APMs AES-1 and AES-2, impacts to light and glare would be less than significant.

Similarly, because the PG&E interconnection infrastructure would not include substantial new sources of light or glare, the construction and modifications of PG&E infrastructure would have a less-than-significant impact under this criterion.

3.1.5 References

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3.2 Agriculture and Forestry Resources

<u>Issues:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
II. AGRICULTURE AND FORESTRY RESOURCES —				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.2.1 Environmental Setting

The study area for agriculture and forestry resources includes farmland within Fresno County (including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency), and forest land and timberland within Fresno County that meets the definitions below.

Agriculture Resources

The Project would be located on approximately 20 acres of land within a 230-acre parcel that has been used as agricultural land in the past and was an irrigated grape vineyard until at least as recently as mid-2018 (Google Earth, 2022). The vineyard has since been removed and the site is not currently being used for agricultural production. The Project site is zoned AE-20, Exclusive Agricultural with a minimum lot size of 20 acres (Fresno County, 2021a).

The entire site proposed for the Orchard Substation and the North-South portion of the proposed access route is categorized as Prime Farmland on the California Department of Conservation's

(DOC) Farmland Mapping and Monitoring Program (FMMP) important farmland maps. Adjacent parcels to the north, east, and west are also categorized as Prime Farmland (DOC, 2020). The area south of the Project site within the existing Gates Substation wall and fence is categorized as Urban and Built-Up Land, while the surrounding undeveloped portion of PG&E Gates Substation property is categorized as Farmland of Local Importance (**Figure 3.2-1, Impacts on Farmland**). The undeveloped portion of the PG&E Substation property is not under active cultivation and appears disturbed or regularly disked with no substantial vegetation present.

Definitions of the DOC farmland categories are provided in Section 3.2.2, *Regulatory Setting*.

The Project site proposed for the Orchard Substation is subject to a Williamson Act contract (defined in Section 3.2.2, *Regulatory Setting*). Williamson Act–contracted parcels are located immediately adjacent to the north, east, and west of the Project site (Fresno County, 2021b).

Forestry Resources

The Project site does not contain any land defined as forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or land zoned Timberland Production (as defined by Government Code Section 51104(g)). No trees are located on the Project site. Almost all of the lands available for timber production in Fresno County lie within the southern part of the Sierra National Forest and the northern portion of the Sequoia National Forest (Fresno County, 2000).

3.2.2 Regulatory Setting

Federal

No federal plans or policies concerning agriculture and forestry resources apply to the Project.

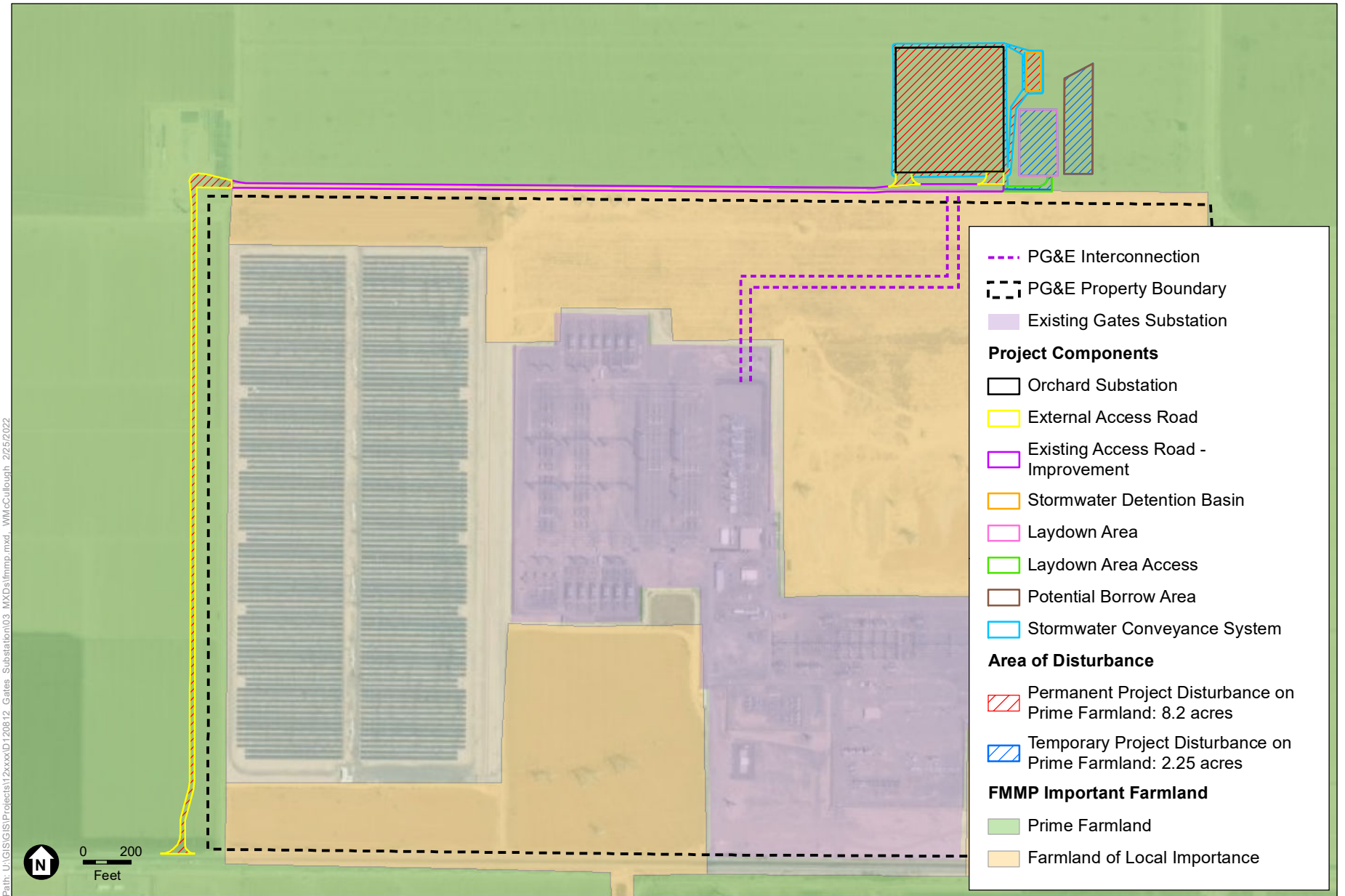
State

California Farmland Mapping and Monitoring Program

The California Department of Conservation’s FMMP provides a classification system for farmland based on technical soil ratings and current land use (DOC, 2021a). The minimum land use mapping unit is 10 acres unless specified; smaller units of land are incorporated into the surrounding map classifications.

For the purposes of this environmental analysis, the term “Farmland” refers to the FMMP map categories *Prime Farmland*, *Unique Farmland*, and *Farmland of Statewide Importance* (hereafter collectively referred to as “Farmland”). Generally, any conversion of land from one of these categories to a lesser quality category or a non-agricultural use would be considered to be an adverse impact. These map categories are defined as follows (DOC, 2021a):

Prime Farmland: Land which has the best combination of physical and chemical features able to sustain long term agricultural production. It 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.



SOURCE: CDOC, 2018

CPUC Gates Dynamic Reactive Support

Figure 3.2-1
Impacts on Farmland

Unique Farmland: Farmland of less quality soils used for the production of the state’s leading agricultural crops. This land is usually irrigated, but may include non-irrigated 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 Statewide Importance: Land that is similar to *Prime Farmland* but with minor shortcomings, such as greater slopes or less ability to hold and store moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

A fourth category is Farmland of Local Importance, which in Fresno County includes all farmable lands that do not meet the definitions of Prime, Statewide, or Unique. This includes land that is or has been used for dryland farming, irrigated pasture, confined livestock and dairy, poultry facilities, aquaculture, and grazing land. Farmland of Local Importance is not included in the definition of agriculture within Public Resources Code Section 21060.1; therefore, this category of land is not the focus of this analysis of agriculture and forestry impacts.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (Williamson Act; Government Code Section 51200 et seq.) is the state’s primary program aimed at conserving private land for agricultural and open space uses. The Williamson Act provides a mechanism through which private landowners can contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. In return, Williamson Act contracts offer tax incentives by ensuring that land is assessed for its agricultural productivity rather than its highest and best (i.e., most remunerative) use. Contracts typically restrict land use for a period of 10 years; however, some jurisdictions exercise the option to extend the term for up to 20 years. Contracts automatically renew unless the landowner or county serves notice of non-renewal (in which case the contract ends at the close of the current renewal period). Additionally, the landowner can petition for cancellation of a contract (DOC, 2021b).

California Public Resources Code

Section 12220(g) of the California Public Resources Code defines forest land as “land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” “Timberland” is defined by Public Resources Code Section 4526 as “land, other than land owned by the federal government..., which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.”

California Government Code

Chapter 6.7 of the Government Code (Sections 51100–51155) regulates timberlands within the state. “Timberland production zone” is defined in Section 51104(g) as an area that has been zoned pursuant to Government Code Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. In this context, “compatible uses” include any use that “does not significantly detract from the use of the property

for, or inhibit, growing and harvesting timber” (Government Code Section 51104(h)). Watershed management, grazing, and the erection, construction, alteration, or maintenance of electric transmission facilities are examples of compatible uses. The general plans of cities and counties may use the term “timberland preserve zone,” which Government Code Section 51104(g) defines as equivalent to “timberland production zone.”

Chapter 7 of the Government Code (Section 51238 et seq.) defines compatible uses for Agricultural Preserves, i.e., land under a Williamson Act contract. Compatible uses that were defined at the time a contract was originally signed determine which uses are presently compatible under the contract. Compatible uses under the Williamson Act contract for the Project site are, by the contract’s terms, determined by reference to the county ordinance that was in effect at the time the contract was signed. Specifically, the original 1970 contract provides that the property “shall be subject to all restrictions and conditions adopted by resolution by the Board of Supervisors of Fresno County, California on November 4, 1969 and recorded November 5, 1969.” Exhibit A of the County’s 1969 Williamson Act resolution provides that “[p]ublic utility and public services, structures, uses and buildings” are compatible uses.

California Public Utilities Commission General Order No. 131-D

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction.” Although such projects are exempt from local land use and zoning regulations and discretionary permitting (i.e., they would not require discretionary approval from a local decision-making body such as a planning commission, county board of supervisors or city council), General Order No. 131-D, Section XIV.B requires that in locating a project “the public utility shall consult with local agencies regarding land use matters.” The public utility would be required to obtain any required non-discretionary local permits.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. The discussion below presents local plans, policies, and regulations for informational purposes only; however, these local laws are superseded by General Order 131-D and so do not govern the CPUC’s evaluation of Project impacts under CEQA.

County of Fresno

General Plan

The Agriculture and Land Use Element of the General Plan describes land use designations and development standards for unincorporated land within the county, and sets out goals, policies, and programs related to agriculture and land use, including those set forth below. The General Plan land use designation for the Project site is Agriculture, which provides for the production of crops and livestock, and for location of necessary agriculture commercial centers, agricultural

processing facilities, and certain nonagricultural activities. No overlay designations apply to the Project site (Fresno County, 2000).

Goal LU-A: To promote the long-term conservation of productive and potentially productive agricultural lands and to accommodate agricultural-support services and agriculturally-related activities that support the viability of agriculture and further the County's economic development goals.

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

Policy LU-A.2: The County shall allow by right in areas designated Agriculture activities related to the production of food and fiber and support uses incidental and secondary to the on-site agricultural operation. Uses listed in Table LU-3 of the General Plan are illustrative of the range of uses allowed in areas designated Agriculture.

Policy LU-A.3: The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value-added processing facilities, and certain non-agricultural uses listed in Table LU-3. Approval of these and similar uses in areas designated Agriculture shall be subject to (a) through (d) of the following criteria:

- a. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
- b. The use should not be sited on productive agricultural lands if less productive land is available in the vicinity;
- c. The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter (0.25) mile radius;
- d. A probable workforce should be located nearby or be readily available;

Criteria e through h relate to the approval of commercial centers, value-added agricultural processing facilities, churches, schools, and existing commercial uses and are not repeated here.

Policy LU-A.13: The County shall protect agricultural operations from conflicts with nonagricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.

Policy LU-A.14: The County shall ensure that the review of discretionary permits includes an assessment of the conversion of productive agricultural land and that mitigation be required where appropriate.

Program LU-A.E: The County shall continue to implement the County's Right-to-Farm Ordinance, and will provide information to the local real estate industry to help make the public aware of the right-to-farm provisions in their area.

Zoning

The Project site is zoned AE-20, Exclusive Agricultural with a minimum lot size of 20 acres (Fresno County, 2018a). As indicated in Section 816.1 of the Fresno County Zoning Code, permitted uses in AE districts include raising livestock, poultry, and plant crops; single-family residences and accessory and farm buildings; and other agricultural and home occupation uses. Section 816.2(D) states that electrical transmission and distribution substations are allowed in AE districts subject to approval of a Director Review and Approval application; however, as described above, the CPUC's land use authority preempts that of the County for this Project. Nonetheless, it is noted that the proposed use as an electrical substation is not listed among the uses requiring a Conditional Use Permit (Section 816.3) nor among the uses that are expressly prohibited in an AE-20 zone (Section 816.4). These facts indicate a basic compatibility with the AE-20 zoning designation.

3.2.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The Applicant proposes to implement the following applicant proposed measure (APM) for agricultural resources as part of the Project:

APM AGR-1: Prior to commencing construction of the Orchard Substation Facilities, LSPGC must ensure that the Williamson Act contract for the 20-acre portion of the Project site impacted by the Project is:

- Cancelled pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 5 of the California Government Code;
- Determined by Fresno County to be consistent with the Proposed Project; or
- Nullified via eminent domain or purchase in lieu of eminent domain pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 6 of the California Government Code.

PG&E Construction Measures

No PG&E construction measures (avoidance and minimization measures or best management practices) would be implemented to address potential effects on agricultural resources.

3.2.4 Environmental Impacts

Methodology and Assumptions

This analysis evaluates potential impacts on designated Important Farmland (which includes Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance). The conversion of Important Farmland would be considered significant if more than 10 acres of Prime Farmland or more than 40 acres of non-Prime Farmland (Farmland of Statewide Importance or Unique Farmland) is converted to non-agricultural use. These thresholds

are used because they are the minimum acreage requirements for individual parcels able to enter into Williamson Act contracts, as stated in Section 51222 of the California Government Code, and represent parcels or areas of agricultural land that are large enough to sustain agricultural operations:

The Legislature further declares that it is in the public interest for local officials and landowners to retain agricultural lands which are subject to contracts entered into pursuant to this act in parcels large enough to sustain agricultural uses permitted under the contracts. For purposes of this section, agricultural land shall be presumed to be in parcels large enough to sustain their agricultural use if the land is (1) at least 10 acres in size in the case of prime agricultural land, or (2) at least 40 acres in size in the case of land which is not prime agricultural land.

Additional factors that determined these threshold limits include the use of 10-acre minimum mapping units for the important farmland maps. Ten acres is the minimum mapping unit on the DOC FMMP Important Farmland maps. The minimum mapping unit indicates the spatial scale of the maps and is the smallest unit or feature represented on the maps, with smaller than 10-acre features being absorbed into the surrounding classifications. In addition, 10 acres is used as the threshold for Prime Farmland because it is commonly used within guidelines utilized by other local agencies in California. Therefore, these thresholds incorporate the sensitivities of the DOC's mapping techniques.

The CPUC has in past analyses identified 10 acres as the minimum threshold for significance, resulting in conclusions of less-than-significant impacts for Farmland conversions of less than 10 acres. Examples include the West of Devers EIR (2015), Devers–Palo Verde No. 2 Project EIR (2006), and Tehachapi Renewable Transmission Project EIR (2010).

Direct and Indirect Effects

The existing Gates Substation is located on disturbed land that has been categorized as Farmland of Local Importance and Urban and Built-Up Land. The PG&E interconnection infrastructure would not convert Farmland to non-agricultural use, would not conflict with existing zoning for agricultural use or with a Williamson Act contract, and would have no impact on forest land or timberland, as none is present on the substation site. Accordingly, the PG&E interconnection infrastructure would have no impact related to agriculture and forestry resources. Therefore, the following analysis focuses on potential effects associated with the Project's Orchard Substation and associated facilities.

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: *Less than Significant.*

The 20-acre Project site proposed for the Orchard Substation is categorized as Prime Farmland on the California Department of Conservation's FMMP important farmland maps (Figure 3.2-1). The Project would permanently convert approximately 8.2 acres of Prime Farmland to non-agricultural use to accommodate the Orchard Substation, switchyard and associated facilities, and ancillary facilities such as a stormwater detention basin, access roads, and parking, as depicted on

Figure 3.2-1. The remaining acreage categorized as prime farmland would not be developed with permanent facilities and would remain available for future agricultural use after restoration of temporary construction disturbance.

The conversion of 8.2 acres of Prime Farmland to non-agricultural use would be below the significance threshold of 10 acres; therefore, this would be a less-than-significant impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract: *No Impact.*

The Project would not conflict with the existing zoning for agricultural use because the site's AE zoning designation allows for electrical transmission substations, provided the Project would not be detrimental to the character of the development in the immediate neighborhood or the public health, safety, and general welfare and be consistent with the General Plan (Fresno County Zoning Code Section 872) (Fresno County, 2018b).

The 20-acre Project site is currently part of an approximately 230-acre parcel that is under a Williamson Act contract. Implementation of the Project would affect only the 20-acre portion of the Williamson Act contract that would be subdivided into a new parcel to accommodate the Project. The remaining portion of the Williamson Act contract property (210 acres) would be unaffected.

To reduce Project impacts associated with a Williamson Act conflict, the Applicant has proposed **APM AGR-1**. This measure would require that the Applicant ensure either that the contract is cancelled prior to construction, the contract is nullified via eminent domain, or the Project is determined by Fresno County to be consistent with the contract.

Under the cancellation process, Fresno County and the landowner would cancel the 20-acre portion of the contract that covers the Project site. The Williamson Act allows landowners to petition the County for cancellation of any contract as to all or any part of the contracted property. Once a petition is filed, the cancellation process proceeds in two phases. First, the County decides whether to approve a tentative cancellation of the contract, subject to conditions of approval. Tentative cancellation is appropriate where (i) cancellation is consistent with the purposes of the Williamson Act (Government Code Section 51282(b)), or (ii) cancellation is in the public interest (Government Code Section 51282(a)(2)). Second, the County must approve *final* cancellation. Final cancellation requires that the landowner pay the applicable cancellation fee (at least 12.5 percent of the assessed value of the property), and the landowner obtain all permits necessary to commence construction of the alternative land use described by the Project.

Although the landowner has not submitted a petition for cancellation to the County, the Project would appear to satisfy conditions for tentative cancellation. Cancellation of the contract applicable to the Project site would not result in the removal of adjacent lands from agricultural use due to the limited area proposed for removal, its location adjacent to the existing Gates Substation, and its compatibility with continued agricultural use on adjacent lands. The Project would not facilitate urban development or result in a discontinuous pattern of urban development, due to its proximity to an existing electrical substation. Regarding the public interest requirement,

the California Independent System Operator (CAISO) identified the need for the Project to alleviate voltage fluctuations and potential power outages associated with the retirement of the Diablo Canyon Nuclear Generating Station in 2024–2025.

Alternatively, the Williamson Act contract on the Project site could be cancelled through the use of eminent domain. By statute, when a public entity files an eminent domain action, any underlying Williamson Act contract is automatically deemed null and void. The same rules apply to eminent domain in lieu: When land is acquired in lieu of eminent domain for a public improvement by a public agency or person, the Williamson Act contract is automatically deemed null and void (Government Code Section 51295). Because the Applicant would be authorized as a “public utility” upon approval of the Project’s Permit to Construct from the CPUC, it may cancel the Williamson Act for the Project site via eminent domain or eminent domain in lieu.

Finally, under the last option described under APM AGR-1, the landowner would obtain a determination from the County that the proposed use is compatible with the Williamson Act contract. Section 51238.3 of the Williamson Act provides that compatible uses defined at the time a contract was originally signed determine which uses are presently compatible under the contract. Compatible uses under the Williamson Act contract for the Project site are, by the contract’s terms, determined by reference to the County ordinance that was in effect at the time the contract was signed. Specifically, the original 1970 contract provides that the property “shall be subject to all restrictions and conditions adopted by resolution by the Board of Supervisors of Fresno County, California on November 4, 1969 and recorded November 5, 1969.” Exhibit A of the County’s 1969 Williamson Act resolution provides that “[p]ublic utility and public services, structures, uses and buildings” are compatible uses (Fresno County, 1969). Because the Project would be a public utility structure subject to approval by the CPUC, the Project would be compatible with the existing Williamson Act contract for the Project site.

In conclusion, implementation of one of the options described in APM AGR-1 would ensure that conflicts with a Williamson Act contract would be avoided. No CEQA impact would result.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g): *No Impact*.

The Project site does not contain any land defined as forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or land zoned Timberland Production (as defined by Government Code Section 51104(g)). The Project site is zoned AE-20, and would continue to be designated as such. Therefore, the Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production and there would be no impact under this criterion.

d) Result in the loss of forest land or conversion of forest land to non-forest use: *No Impact.*

The Project site does not contain any forest land (as defined in Public Resources Code Section 12220(g)). Therefore, the Project would not result in the loss of forest land or conversion of forest land to non-forest use and there would be no impact under this criterion.

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: *Less than Significant.*

As described under criteria c) and d), the Project site does not contain any land defined as forest land, timberland, or timberland zoned Timberland Production, and does not contain any mature trees. Therefore, the construction of the Project would not result in the conversion of forest land to non-forest use. The direct, permanent loss of approximately 8.2 acres of Prime Farmland to non-agricultural uses is addressed under criterion a.

The Project has been sited and designed to interconnect to the adjacent Gates Substation and allow for the continued agricultural operation of areas surrounding the Project site and the existing substation. Stormwater and any potential pollutants or hazardous materials generated at the Project site would be retained on-site or disposed of at properly licensed facilities and, thus, would not affect adjacent agricultural uses. The Project would not have a detrimental impact on the use or management of surrounding properties, nor would it facilitate urban development, as described in Section 3.14, *Population and Housing*.

During Project construction, the remaining acres of Prime Farmland within the 20-acre Project site would be temporarily disturbed to accommodate materials and equipment staging and storage as well as employee parking. These uses of the site could result in compaction and loss of topsoil, which could result in long-term changes to this portion of the Project site that could cause the land to be unusable for agriculture. However, as described in Section 2.5.2.1 in Chapter 2, *Project Description*, following initial clearing of the Orchard Substation site, topsoil would be salvaged to a depth of 12 inches, or to actual depth if shallower. Salvaged topsoil material would be kept on-site in the immediate vicinity of temporary disturbance areas or at a nearby approved work area. As described in Section 2.5.2.17 in Chapter 2, following completion of construction, temporarily disturbed areas would be cleaned and all construction debris removed, and these areas would be restored to original contours and drainage patterns and decompacted. Salvaged topsoil would be re-spread on the temporarily disturbed areas, and the areas would be reseeded or replacement vegetation would be planted, as appropriate. The implementation of these preconstruction and site restoration practices, as well as erosion controls in accordance with the Orchard Substation Facilities SWPPP and proposed APMs identified in Table 2-9, would ensure no loss of valuable agricultural topsoil and would restore the remaining acres of Prime Farmland to a condition that again could be used for agriculture and would retain the soil qualities responsible for its categorization as Prime Farmland. Therefore, the impact on Farmland from temporary disturbance would be less than significant.

3.2.5 References

- California Department of Conservation (DOC), 2020. Rural Land Mapping Edition, Fresno County Important Farmland 2018, Sheet 1 of 2. June 2020.
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-

3.3 Air Quality

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
III. AIR QUALITY —				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 Environmental Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality.

Regional Topography, Meteorology, and Climate

The Project is located within an unincorporated area of Fresno County directly north of, and adjacent to, the Pacific Gas and Electric Company (PG&E) owned Gates Substation. The Project is located approximately 3.3 miles southwest of the city of Huron. The land to the north, east, and west of the Project is primarily used for agricultural purposes with no development, and the existing PG&E Gates Substation is located to the south.

Criteria Air Pollutants

The U.S. 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 criteria (see Section 3.3.2, *Regulatory Setting*). The following criteria pollutants are a concern in the study area.

Ozone

Ozone (O₃) 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 reactive organic gases (ROG) and oxides of nitrogen (NO_x), including nitrogen dioxide (NO_2), and the presence of sunlight. ROG 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 ROG and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Particulate Matter

Respirable particulate matter (PM_{10}) and fine particulate matter ($\text{PM}_{2.5}$) represent fractions of particulate matter that 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 more 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 absorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility.

Other Criteria Pollutants

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. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Sulfur dioxide (SO_2) is produced through combustion of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (PM_{10} and $\text{PM}_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances.

They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes nearly 200 compounds, including Diesel Particulate Matter (DPM) emissions from diesel-fueled engines (CARB, 2011).

Valley Fever

Valley Fever (formally known as Coccidioidomycosis) is an infectious disease caused by the fungus *Coccidioides immitis*. Valley Fever is also known as San Joaquin Valley Fever, Desert Fever, or Cocci. Infection is caused by inhalation of *Coccidioides immitis* and *Coccidioides posadasii* spores that have become airborne when dry, dusty soil or dirt is disturbed by natural processes such as wind or earthquakes, or by human induced ground disturbing activities such as construction and farming.

The California Department of Public Health (CDPH) received reports of 9,004 incident cases of Valley Fever for 2019, which was an 18 percent increase from 2018 (CDPH, 2020). Approximately 60 percent of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Coccidioidomycosis is highly endemic in the San Joaquin Valley and remains an important public health problem in California. There is currently no vaccine; however, efforts to develop a vaccine are ongoing (CDPH, 2020). As a population with more than 20 cases per year of San Joaquin Valley Fever per 100,000 people, Fresno County is considered “highly endemic” (CDIR, 2017), and western Fresno County is considered an area of elevated Valley Fever activity (Fresno County, 2021a). In susceptible people and animals, infection occurs when a *Coccidioides immitis* spore is inhaled. Fungal spores become airborne when soil is disturbed by natural processes such as wind or earthquakes, or by human-induced ground disturbing activities such as construction and farming.

The Centers for Disease Control and Prevention (CDC) and Fresno County report that farm workers, construction workers, others who engage in soil-disturbing activities, and anyone spending time outdoors in western Fresno County are at risk for Valley Fever (CDC, 2021a; Fresno County 2021a, 2021b). High winds can carry dust containing the spores long distances. Most people infected with Valley Fever have no symptoms, but if symptoms develop, they usually occur in the lung and initially resemble the flu or pneumonia (e.g., fatigue, cough, shortness of breath, chest pain, fever, rash, headache and joint aches). Valley Fever is not contagious, and secondary infections are rare. On average, there were approximately 200 Valley Fever-associated deaths each year (deaths in which Valley Fever was listed as a primary or contributing cause on a death certificate) in the United States between 1999 and 2019 (CDC, 2021a). The number of cases of Valley Fever in Fresno County has varied over the past several years. Between 2011 and 2014, the total number of cases decreased from 724 to 156. In 2016, the number of total cases spiked to 601, from 267 cases reported the previous year in 2015. Those most at risk of developing severe symptoms include Hispanics, African Americans, Filipinos, pregnant women, adults of older age groups, and people with weakened immune systems (CDC, 2021b).

Existing Air Quality

The Project is located within Fresno County, which is within the San Joaquin Valley Air Basin (SJVAB), the largest air basin in the state. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the government agency that regulates sources of air pollution within the county

and the SJVAB. The SJVAPCD maintains a regional monitoring network that measures the ambient concentrations of criteria pollutants in the SJVAB. Ambient air quality measurements from air monitoring stations maintained by SJVAPCD help to determine the level of air quality in the local area. The closest air quality monitoring station to the Project site is the Hanford-South Irwin Street station, approximately 30 miles to the northeast. **Table 3.3-1** shows a 5-year (2016 through 2020) summary of ozone, PM₁₀, PM_{2.5}, and NO₂ data monitored at the Hanford-South Irwin Street station. The data are compared to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS).

**TABLE 3.3-1
 AIR QUALITY DATA SUMMARY (2016-2020) FOR SAN JOAQUIN VALLEY**

Pollutant	Standard	Monitoring Data by Year				
		2016	2017	2018	2019	2020
Ozone						
Highest 1-Hour Average, ppm		0.097	0.106	0.108	0.093	0.103
Days over State Standard	0.09 ppm	2	7	1	0	6
Highest 8-Hour Average, ppm		0.088	0.094	0.082	0.076	0.088
Days over State/National Standards ^a	0.070 ppm	49	38	29	13	26
Fine Particulate Matter, PM_{2.5}						
Highest 24-Hour Average, µg/m ³		59.7	113.4	107.8	48.2	147.0
Measured days over National Standard Exceedances/Samples ^b	35 µg/m ³	25	33	31	20	52
Annual Average, µg/m ³		15.6	16.8	NA	12.1	19.8
Exceed State Standard?	12 µg/m ³	Yes	Yes	NA	No	Yes
Particulate Matter, PM₁₀						
California Highest 24-Hour Average		110.5	148.8	181.1	220.5	180.9
Measured Days over State Standard ^b	50 µg/m ³	20	20	19	17	22
National Highest 24-Hour Average		152.2	298.4	174.2	211.7	180.4
Measured Days over National Standard ^b	150 µg/m ³	0	0	1	1	3
State Annual Average		44.3	47.2	47.9	45.2	NA
Exceed State Standard?	20 µg/m ³	Yes	Yes	Yes	Yes	NA
Nitrogen Dioxide, NO₂						
Highest 1-Hour Average		0.052	0.056	0.056	0.062	0.051
Days over State Standard	0.18 ppm	0	0	0	0	0
Days over National Standard	0.100 ppm	0	0	0	0	0
State Annual Average		0.008	0.008	0.008	0.008	0.088
Exceed State Standard?	0.030 ppm	No	No	No	No	No

NOTES:

Generally, state standards are not to be exceeded and national standards are not to be exceeded more than once per year. ppm = parts per million; µg/m³ = micrograms per cubic meter; NA = Not Available.

^a In October 2015, the USEPA implemented a new national 8-hour ozone standard of 70 ppb (or 0.070 ppm).

^b Measurements of PM_{2.5} are usually collected every 1 to 3 days. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been 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 standard.

SOURCE: CARB, 2021.

As shown in Table 3.3-1, the state 1-hour ozone standard was exceeded one to seven times per year during 2016 through 2018 and 2020 and was not exceeded in 2019; and the state and national 8-hour ozone standards were exceeded 13 to 49 times each year during the 5-year study period. The national 24-hour average PM_{2.5} standard was exceeded 20 to 52 times each year during the study period, and state annual average PM_{2.5} standard was exceeded in 2016, 2017, and 2020, with no data available for 2018, and the standard was not exceeded in 2019. The state 24-hour average PM₁₀ standard was exceeded 17 to 22 times each year during the study period; the national 24-hour average PM₁₀ standard was exceeded once or three times in 2018, 2019, and 2020; and the state annual average PM₁₀ standard during 2016 through 2019, and data were not available for 2020. There were no exceedances of the NO₂ standards.

Attainment Status

Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. To address non-attainment areas, California created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards. The SJVAPCD is the jurisdictional entity in the SJVAPCD that is responsible for implementing the SIP. The SJVAPCD developed regional air quality management plans to implement control measures to try to achieve attainment status for ozone, PM₁₀, and PM_{2.5} (see Section 3.3.2, *Regulatory Setting*). The attainment status for criteria pollutants within the SJVAB is shown in **Table 3.3-2, San Joaquin Valley Attainment Status by Pollutant**.

**TABLE 3.3-2
SAN JOAQUIN VALLEY ATTAINMENT STATUS BY POLLUTANT**

Pollutant	Federal	State
Ozone (one-hour standard)	No Federal Standard	Nonattainment/Severe
Ozone (eight-hour standard)	Nonattainment/Extreme	Nonattainment
Carbon Monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxides (NO ₂)	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment
Fine Particulates (PM _{2.5})	Nonattainment	Nonattainment
Inhalable Particulates (PM ₁₀)	Attainment	Nonattainment

SOURCE: CARB, 2019

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include age, pre-existing health problems, proximity to emissions sources and/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 infirm 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 at 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 closest sensitive receptors are residences roughly 1.8 miles from the Project site. There are no other sensitive receptors within that distance from the Project site.

3.3.2 Regulatory Setting

Air quality within the SJVAB is addressed through the efforts of various federal, state, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policymaking, education, and a variety of programs. The air pollutants of concern and agencies primarily responsible for improving the air quality within the SJVAB and the pertinent regulations are discussed below.

Criteria Air Pollutants

Regulation of air pollution is achieved through both CAAQS and NAAQS as well as emission limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), the USEPA has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. As discussed above, these pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, the USEPA has set “primary” and “secondary” maximum ambient thresholds for all seven criteria pollutants. Primary thresholds were set to protect human health, particularly sensitive receptors 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.

As discussed previously, 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 (i.e., CAAQS) for most of the criteria air pollutants. **Table 3.3-3** presents both sets of ambient air quality standards (i.e., national and state) and provides the attainment status for each. California has also established state ambient air quality standards for

sulfates, hydrogen sulfide, and vinyl chloride; however, air emissions of these pollutants are not expected under the Project and are not further discussed in this IS/MND.

**TABLE 3.3-3
NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Criteria Pollutant	Averaging Time	State Standard	Federal Primary Standard
Ozone	8 Hour	0.070 ppm	0.070 ppm
	1 Hour	0.09 ppm	---
Carbon Monoxide	8 Hour	9.0 ppm	9 ppm
	1 Hour	20 ppm	35 ppm
Nitrogen Dioxide	Annual Average	0.030 ppm	0.053 ppm
	1 Hour	0.18 ppm	0.100 ppm
Sulfur Dioxide	Annual Average	---	0.030 ppm
	24 Hour	0.04 ppm	0.14 ppm
	1 Hour	0.25 ppm	0.075 ppm
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 mg/m ³	---
	24 Hour	50 mg/m ³	150 mg/m ³
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 mg/m ³	12.0 mg/m ³
	24 Hour	---	35 mg/m ³
Lead	3-Month Rolling Average	---	0.15 mg/m ³
Hydrogen Sulfide	1 Hour	0.03 ppm/42 µg/m ³	---
Sulfates	24 Hour	25 mg/m ³	---
Vinyl Chloride	24 Hour	0.01 ppm/26 µg/m ³	---

NOTES:

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; --- = no applicable standard

SOURCE: CARB, 2016

Federal

The USEPA is responsible for implementing programs established under the federal CAA, such as establishing and reviewing the NAAQS and judging the adequacy of SIPs, but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

State

The California Air Resources Board (CARB) is responsible for establishing and reviewing the state standards, compiling the California SIP and securing approval of that plan from USEPA, conducting research and planning, and identifying TACs. CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California's air quality districts, which are organized at the county or regional level. County or regional air quality management districts are primarily responsible for regulating

stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal CAA and California CAA.

California's Diesel Risk Reduction Plan/Diesel Fuel Regulations

As part of California's Diesel Risk Reduction Plan, CARB has issued numerous regulations to reduce diesel emissions from vehicles and equipment that are already in use. Combining these retrofit regulations with new engine standards for diesel fueled vehicles and equipment, CARB intended to reduce DPM emissions by 85 percent from year 2000 levels by 2020. California Diesel Fuel Regulations (13 Cal. Code Regs. Sections 2281–2285; 17 Cal. Code Regs. Section 93114) provide standards for diesel motor vehicle fuel and non-vehicular diesel fuel.

CARB has also adopted a regulation for in-use off-road diesel vehicles that is designed to reduce emissions from diesel-powered construction and mining vehicles by imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than 5 minutes.

Valley Fever

On October 11, 2019, Assembly Bill (AB) 203 was published to add Section 6709 to the Labor Code, relating to occupational safety and health. This bill requires construction employers engaging in specified work activities or vehicle operation in counties where Valley Fever is highly endemic, as defined, to provide effective awareness training on Valley Fever to all employees annually and before an employee begins work that is reasonably anticipated to cause substantial dust disturbance. The bill requires the training to cover specific topics and authorizes the training to be included in the employer's injury and illness prevention program training or as a standalone training program. The training shall include the following topics:

1. What Valley Fever is and how it is contracted;
2. High risk areas and types of work and environmental conditions during which the risk of contracting Valley Fever is highest;
3. Personal risk factors that may create a higher risk for some individuals;
4. Personal and environmental exposure prevention methods;
5. The importance of early detection, diagnosis, and treatment to help prevent the disease from progressing;
6. Recognizing common signs and symptoms of Valley Fever;
7. The importance of reporting symptoms to the employer and seeking medical attention from a physician and surgeon for appropriate diagnosis and treatment; and
8. Common treatment and prognosis for Valley Fever.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. CPUC General Order 131-D (GO 131-D), Section XIV.B, states that “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters” (CPUC, 1995). Public utilities are directed to consider local regulations and consult with local agencies, but county regulations are not applicable as Fresno County does not have jurisdiction over the Project. Because the CPUC has exclusive jurisdiction, the Project is not subject to local land use and zoning regulations or discretionary permits. Details below that relate to local regulations are provided for informational purposes and to assist with California Environmental Quality Act (CEQA) review. Although the Applicant and PG&E are not subject to local discretionary permitting, ministerial permits would be secured as required.

San Joaquin Valley Air Pollution Control District

The Project site is located within the jurisdiction of the SJVAPCD, which regulates air pollutant emissions for all sources throughout the SJVAB other than motor vehicles. The SJVAPCD administers permits governing stationary sources. In addition to administering permits, SJVAPCD enforces the following rules, regulations, and plans that would apply to the Project.

Regulation VIII (Fugitive PM₁₀ Prohibitions)

Regulation VIII contains rules developed pursuant to USEPA guidance for serious PM₁₀ non-attainment areas. Rules included under this regulation limit fugitive dust PM₁₀ 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 3.3-4** contains requirements to which the Project would be subject to comply with SJVAPCD Rule 8021 and **Table 3.3-5** contains control measures that must be implemented during Project construction activities pursuant to Rule 8021, *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*.

Rule 9510 (Indirect Source Review)

Some projects are required to implement PM and NO_x reduction measures as required under SJVAPCD Rule 9510, Indirect Source Review (ISR), which was adopted by the SJVAPCD’s Governing Board in 2005 to reduce the impacts of growth in emissions resulting from new land development in the SJVAPCD. SJVAPCD Rule 9510 applies to new development projects that would equal or exceed specific size limits called “applicability thresholds” (SJVAPCD, 2017). The applicability thresholds were established at levels intended to capture projects that emit at least 2 tons of NO_x or 2 tons of PM₁₀ per year.

Rule 4101 (Visibility)

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

**TABLE 3.3-4
 SJVAPCD RULE 8021 NON-ADMINISTRATIVE MEASURES
 AND NOTIFICATION REQUIREMENTS APPLICABLE TO THE PROJECT**

No.	Measure
5.2	A person shall control the fugitive dust emissions to meet the requirements in [SJVAPCD] Table 8021-1 [shown below as Table 3.2.3-5].
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 visible dust emissions 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 prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 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 Air Pollution Control Officer has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the Air Pollution Control Officer 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 Air Pollution Control Officer 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.
6.3.6	<p>A Dust Control Plan shall contain all of the following information:</p> <p>6.3.6.1: Name(s), address(es), and phone number(s) of person(s) and owner(s)/operator(s) responsible for the preparation, submittal, and implementation of the Dust Control Plan and responsible for the dust generating operation and the application of dust control measures.</p> <p>6.3.6.2: A plot plan which shows the type and location of each project.</p> <p>6.3.6.3: The total area of land surface to be disturbed, daily throughput volume of earthmoving in cubic yards, and total area in acres of the entire project site.</p> <p>6.3.6.4: The expected start and completion dates of dust generating and soil disturbance activities to be performed on the site.</p> <p>6.3.6.5: The actual and potential sources of fugitive dust emissions on the site and the location of bulk material handling and storage areas, paved and unpaved roads; entrances and exits where carryout/trackout may occur; and traffic areas.</p> <p>6.3.6.6: Dust suppressants to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and capacity of application equipment; and information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.</p> <p>6.3.6.7: Specific surface treatment(s) and/or control measures utilized to control material carryout, trackout, and sedimentation where unpaved and/or access points join paved public access roads.</p> <p>6.3.6.8: At least one key individual representing the owner/operator or any person who prepares a Dust Control Plan must complete a Dust Control Training Class conducted by the District. The District will conduct Dust Control Training Classes on an as needed basis.</p>

SOURCE: SJVAPCD, 2004

**TABLE 3.3-5
SJVAPCD CONTROL MEASURE OPTIONS FOR CONSTRUCTION, EXCAVATION, EXTRACTION,
AND OTHER EARTH MOVING ACTIVITIES**

Letter/No.	Measure
A	Pre-Activity
A1	Pre-water site sufficient to limit visible dust emissions to 20 percent opacity.
A2	Phase work to reduce the amount of disturbed surface area at any one time.
B	During Active Operations
B1	Apply water or chemical/organic stabilizers/suppressants sufficient to limit visible dust emissions to 20 percent opacity; or
B2	Construct and maintain wind barriers sufficient to limit visible dust emissions to 20 percent opacity. If using wind barriers, control measure B1 above shall also be implemented.
B3	Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit visible dust emissions to 20 percent opacity and meet the conditions of a stabilized unpaved road surface.
C	Temporary Stabilization During Periods of Inactivity
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.

SOURCE: SJVAPCD, 2004, Table 8021-1

Rule 4102 (Nuisance)

Rule 4102 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.

Air Quality Management Plans

As required by the federal and California Clean Air Acts, air basins or portions thereof have been classified as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the standards have been achieved. Jurisdictions of non-attainment areas also are required to prepare an air quality management plan that includes strategies for achieving attainment. The SJVAPCD has approved air quality management plans demonstrating how the SJVAB will reach attainment with the federal 1-hour and 8-hour ozone, PM₁₀, and PM_{2.5} and California CO standards.

Ozone Attainment Plans

The *Extreme 1-Hour Ozone Attainment Demonstration Plan*, adopted by the SJVAPCD Governing Board October 8, 2004, set forth measures and emission-reduction strategies designed to attain the federal 1-hour ozone standard by November 15, 2010. The 1-hour ozone standard was subsequently revoked by USEPA in June of 2005. The *2013 Plan for the Revoked 1-Hour Ozone Standard* was

approved by the Governing Board on September 19, 2013 (SJVAPCD, 2013) to attain the 1-hour ozone standard by 2017. On July 18, 2016, the USEPA published in the Federal Register the final action to determine that the SJVAB has attained the 1-hour ozone standard.

The *2007 Ozone Plan*, approved by CARB on June 14, 2007, demonstrates how the SJVAB would meet the federal 8-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 SJVAB. 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 SJVAB into attainment with the federal 8-hour ozone standard (SJVAPCD, 2007).

On April 16, 2009, the SJVAPCD Governing Board adopted the *Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans* (SJVAPCD, 2009). With respect to the 8-hour standard, the plan assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme ozone non-attainment area), evaluates SJVAPCD rules against new Control Techniques Guidelines promulgated since August 2006, and reviews additional rules and amendments adopted by the Governing Board since August 17, 2006, for reasonably available control technology consistency.

SJVAPCD adopted the *2016 Plan for the 2008 8-Hour Ozone Standard* in June 2016. This plan satisfies Clean Air Act requirements and ensures expeditious attainment of the 75 parts per billion 8-hour ozone standard (SJVAPCD, 2016). On May 19, 2020, the Governing Board adopted the *2020 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone Standard* (SJVAPCD, 2020) that includes a demonstration that the SJVAPCD rules implement Reasonably Available Control Technology (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.

Particulate Matter Attainment Plans

Effective November 12, 2008, USEPA re-designated the SJVAB as an attainment area with respect to the PM₁₀ NAAQS and approved the *2007 PM₁₀ Maintenance Plan* (USEPA, 2008). In April 2008, the SJVAPCD Board adopted the *2008 PM_{2.5} Plan* (SJVAPCD, 2008) and subsequently approved amendments on June 17, 2010. 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 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 SJVAB experienced higher PM_{2.5} levels during the 2013/2014 winter 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, 2015e).

SJVAPCD adopted the *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard* on September 15, 2016. This plan addresses the updated USEPA federal annual PM_{2.5} standard of 12 µg/m³, established in 2012. This plan includes an attainment impracticability demonstration and request

for reclassification of the SJVAB from Moderate non-attainment to Serious non-attainment (SJVAPCD, 2016b).

The *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards* was adopted on November 15, 2018, and utilizes extensive science and research, state-of-the-art air quality modeling, and the best available information in developing a strategy to attain the federal health-based 1997, 2006, and 2012 standards for PM_{2.5}. The Plan consists of a combination of innovative regulatory and non-regulatory measures including aggressive incentive-based control measures that achieve the emissions reductions needed to bring the area into attainment (SJVAPCD, 2018).

Fresno County General Plan

The Fresno County General Plan contains the following air quality goal and policies aimed at reducing air emissions from development projects, including the Project (Fresno County, 2000):

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

Policy OS-G.13: The County shall include fugitive dust control measures as a requirement for subdivision maps, site plans, and grading permits. This will assist in implementing the SJVUAPCD's particulate matter of less than ten (10) microns (PM₁₀) regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.

Policy OS-G 14: The County shall require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.

3.3.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following air quality measures have been proposed by the Applicant and would be implemented as part of the Orchard Substation Facilities portion of the Project. The Applicant has also identified Applicant Proposed Measure (APM) GHG-1 to minimize greenhouse gas (GHG) emissions, which would also reduce criteria pollutant emissions (see Section 3.2.8, *Greenhouse Gas Emissions*). PG&E would not implement the following APMs when constructing or operating the interconnection facilities, but would instead implement the best management practices described in Section 2.6.5.

- **APM AQ-1:** The Orchard Substation Facilities portion of the Project would ensure that at least 32 percent of all diesel-powered equipment use (tracked as horse-power hours) during construction year 2022 is from equipment that meet USEPA-certified Tier 4 standards, the highest USEPA-certified tiered emission standards.

Prior to the commencement of construction, LSPGC shall develop a diesel-powered equipment use hours tracking tool and procedure. The tracking tool shall be utilized by the Project to keep track of the certified engine tier and daily equipment use hours of all off-road

diesel-powered equipment. If all diesel-powered equipment is certified Tier 4, the tracking tool would not be required; however, the Orchard Substation Facilities portion of the Project would be required to verify, record, and track the engine tier of all equipment. The tracking tool shall be maintained by the Project and tracking updates shall be submitted to the CPUC on a monthly basis to track the Project's compliance. Records of the engine tier of all equipment shall be kept onsite and made available to the CPUC upon request.

- **APM AQ-2:** The Orchard Substation Facilities portion of the Project would comply with SJVAPCD Rule 8021 and would prepare and implement a Dust Control Plan for approval by the SJVAPCD Air Pollution Control Officer (APCO). The Dust Control Plan would include specific dust control measures as prescribed within Rule 8021, or as otherwise requested by the APCO. This plan would be submitted and approved prior to construction.
- **APM AQ-3:** The Orchard Substation portion of the Project would comply with AB 203 and provide Valley fever awareness training to all construction workers, inspectors, monitors, and any other project personnel that are required to perform work in or near disturbed soils or dust emissions at the Orchard Substation Facilities site. The Valley fever awareness training materials would be prepared by a qualified professional, adapted from agency published trainings (CDPH, CDC, etc.), or otherwise produced by a qualified source. The Valley fever awareness training would be incorporated into the Project's overall Worker Environmental Awareness Program (WEAP) training.

PG&E Construction Measures

PG&E would implement the following Best Management Practices (BMPs) to address impacts to air quality attributable to PG&E Interconnection Facilities portion of the Project construction, operations, and/or maintenance.

- **BMP-4: Asbestos.** If any loadbearing structure (poles, towers, concrete pads, etc.) is to be removed, this Project will require asbestos testing and notification to the local Air District or California Air Resource Board (CARB). Notify the Environmental Field Specialist (EFS) at least 45 calendar days prior to work commencing. The Air District must be notified at least 10 working days prior to work (demolition) commencing, some districts require 14 days. If the construction start date changes, notify the EFS immediately as notification to the Air District may need to be resubmitted. EFS is responsible for obtaining any necessary permits from the air district prior to start of work.
- **BMP-5: Combustion Sources.** If project or work involves the installation of a combustion source that may require a local air district permit, please work with the EFS and Air SME to evaluate compliance requirements. Combustion sources, depending on HP or MMBtu rating may require an Authority to Construct Permit prior to any installation activities and a Permit to Operate prior to operating.

Typical Combustion Sources that require permits are:

- Engines \leq 50 HP;
 - Boilers/Heaters that combust natural gas; and
 - Flares
- **BMP-6: Fugitive Dust General.** Types work activities where water trucks or other dust abatement methods are typically required include: excavation, trenching, grading, sand

blasting, and demolition. The crew shall not allow visible dust to pass beyond the project boundary. The crew shall abate dust by:

- Applying water to disturbed areas and to storage stockpiles;
- Applying water in sufficient quantities to prevent dust plumes during activities such as clearing & grubbing, backfilling, trenching and other earth moving activities;
- Limit vehicle speed to 15 miles per hour;
- Load haul trucks with a freeboard (space between top of truck and load) of six inches or greater;
- Cover the top of the haul truck load;
- Clean-up track-out at least daily; and
- The crew shall not generate dust in amounts that create a nuisance to wildlife or people, particularly where sensitive receptors such as schools and hospitals are located nearby or down-wind.

During inactive periods (e.g. after normal working hours, weekends, and holidays), the crew shall apply water or other approved material to form a visible crust on the soil and restrict vehicle access.

- **BMP-7: San Joaquin Valley AQMD >1 acre of soil disturbing activities.** A Construction Notification Form must be submitted to the San Joaquin Valley APCD by the Environmental Lead/Project EFS at least 48 hours prior to commencing any earth moving activities.

3.3.4 Environmental Impacts

Methodology and Assumptions

Significance Criteria

The SJVAPCD has established significance thresholds for criteria pollutants for use in determining CEQA air quality impacts (SJVAPCD, 2015a). These thresholds can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that a project's total air quality impacts are below the state and federal ambient air quality standards. These annual significance thresholds for construction and operations are shown in **Table 3.3-6, SJVAPCD Significance Thresholds**. The operational thresholds of significance are relative to calendar year, although construction emissions are assessed on a rolling 12-month period.

Non-criteria pollutants such as hazardous air pollutants or TACs are also regulated by the SJVAPCD. A project cannot result in a cancer risk equal to or greater than 20 in one million for the Maximally Exposed Individual (MEI) (SJVAPCD, 2015b) or it exceeds the threshold. The threshold for Acute and Chronic Non-Carcinogens, is a Hazard Index equal to or greater than one for the MEI (SJVAPCD, 2015b).

**TABLE 3.3-6
 SJVAPCD SIGNIFICANCE THRESHOLDS**

Pollutant/Risk Criteria	Construction	Operations
CO (tpy)	100	100
NOx (tpy)	10	10
ROG (tpy)	10	10
SOx (tpy)	27	27
PM ₁₀ (tpy)	15	15
PM _{2.5} (tpy)	15	15
Cancer Risk (per million)*	20	20
Acute Hazard Index (unitless)*	1	1
Chronic Hazard Index (unitless)*	1	1

NOTES: tpy = tons per year

* The San Joaquin Valley Air Pollution Control District's current thresholds of significance for toxic air contaminant (TAC) emissions are for operations, however, they are conservatively being applied to construction for the purposes of determining significance.

SOURCE: SJVAPCD 2015a, SJVAPCD 2015b

Methodology and Assumptions

Project-related regional air quality impacts would fall into two categories: short-term impacts due to construction, and long-term impacts due to operation. First, during Project construction (short-term), the Project would affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. The Orchard Substation would comprise the construction of two STATCOM units and ancillary components.

The Applicant provided air pollutant emissions calculations and estimates for the construction activities that would be associated with the Orchard Substation Facilities portion of the Project (LSPGC, 2021; see Appendix AIR). The Applicant's emission calculations and health risk assessment were independently reviewed by the CPUC's consultant, Environmental Science Associates (ESA), and were found to be technically adequate with the exception of the fugitive dust emissions (see below). Exhaust emissions that would be generated from construction equipment and vehicles, as well as fugitive dust from ground disturbance and vehicle travel on paved and unpaved roads, were estimated using California Emissions Estimator Model Version 2016.3.2 (CalEEMod). Construction was assumed to occur 6 days per week with construction starting in March 2022. Detailed information about the specific construction equipment and vehicle trips for each phase of construction, as well as the durations of the phases, were provided for the Orchard Substation Facilities portion of the Project by the Applicant's engineer and are identified in Appendix AIR.

The on-site fugitive dust emissions estimated for the Orchard Substation Facilities portion of the Project using CalEEMod appear to be underestimated and do not account for all the site preparation/roadwork and below grade construction activities, such as grading. Therefore, the fugitive dust emissions were supplemented to consider all preparation/roadwork and below grade construction activities using a conservative fugitive dust emission rate of 20 pounds of PM₁₀ per acre graded per day (CARB, 2002). It is assumed that a total of up to 5 acres of ground

disturbance would occur each workday during the site preparation/roadwork and below-grade construction that would be associated with the Orchard Substation Facilities portion of the Project for a total of 143 workdays. CalEEMod PM_{2.5} fractions for soil disturbance activities were used to estimate PM_{2.5} fugitive dust emissions that would be associated with site preparation activities. The supplemented fugitive dust emissions estimate also include a 61 percent control efficiency (SCAQMD, 2007) associated with implementation of APM AQ-2 and SJVAPCD Rule 8021. The supplemental fugitive dust emissions estimates are included in Appendix AIR, *Air Quality Assessment*.

The operation and maintenance activities required for the Orchard Substation are anticipated to produce limited sources of emissions from worker trips, area sources such as landscaping, and energy usage from on-site auxiliary equipment usage (e.g., control room heating, ventilation, and air conditioning [HVAC] units, communications equipment, and facility lighting). Anticipated operations emissions were estimated in using CalEEMod and were assumed to begin in 2023.

To be conservative with respect to potential health risk impacts associated with DPM, the Applicant prepared a construction phase health risk assessment for the Orchard Substation Facilities portion of the Project that includes cancer risk and chronic hazard index estimates. DPM mass emissions for the health risk assessment were estimated using the annual PM₁₀ exhaust emissions from on-site construction operations obtained from the annual CalEEMod model output by summing each on-site source for the construction duration. The DPM concentration at the MEI receptor was then found by modeling the construction emissions with the Air Quality Dispersion Modeling (AERMOD) dispersion model. Once the dispersed concentrations of diesel particulates were estimated, the exposure was evaluated by calculating the worst-case inhalation cancer risk and chronic hazard index using methods identified in the OEHHA Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2015).

The emissions that would be associated with the PG&E Interconnection Facilities portion of the Project have not been quantified; however, given its reduced area of disturbance and reduced scope of construction activities compared to the Orchard Substation Facilities portion of the Project, it is assumed that the construction emissions that would be associated with the PG&E Interconnection Facilities would be less than what was estimated for the Orchard Substation Facilities portion of the Project. For example, only 7 acres of ground disturbance would occur during construction of the PG&E Interconnection Facilities compared to 12 acres of ground disturbance during construction of the Orchard Substation Facilities. Construction of the PG&E Interconnection Facilities would take approximately 18 months and would include trenching conductor/cable and telecommunication lines and installation of the above-ground interconnection facilities, while construction of the Orchard Substation Facilities would take approximately 22 months and would include development of the Orchard Substation, access roads, trenching for the below-ground conductor/cable and telecommunication lines, and construction of the stormwater detention basin. For the purposes of a conservative analysis of criteria pollutant mass emissions, it is assumed that the emissions that would be associated with the PG&E Interconnection Facilities portion of the Project would be the same as or less than the emissions estimated for the Orchard Substation Facilities portion of the Project.

Direct and Indirect Effects

a) Conflict with or obstruct implementation of the applicable air quality plan: *Less than Significant.*

As discussed above, the SJVAB is currently designated as a non-attainment area for federal and state standards with regard to PM_{2.5} and ozone, and is also designated as a non-attainment area for state PM₁₀ standards. The SJVAPCD is responsible for implementing programs and regulations required by the federal CAA and the California CAA within the SJVAB. In this capacity, SJVAPCD has prepared plans to attain federal and state ambient air quality standards for which it has been designated as non-attainment. Current air quality plans for the SJVAB include:

- 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} standards;
- 2007 PM₁₀ Maintenance Plan and Request for Redesignation;
- 2020 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan; and
- 2014 Reasonably Available Control Technology demonstration for the 8-Hour Ozone State Implementation Plan.

The air quality plans include emissions inventories that identify sources of air pollutants, evaluations for feasibility of implementing potential opportunities to reduce emissions, sophisticated computer modeling to estimate future levels of pollution, and a strategy for how air pollution will be further reduced. In addition, the SJVAPCD has adopted a guidance document, *Guidance for Assessing and Mitigating Air Quality Impacts* (Guidance), to assist in the evaluation of air quality impacts of projects proposed within its jurisdiction (SJVAPCD, 2015c). The Guidance provides recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements and includes recommended thresholds of significance, mitigation measures, and background air quality information. It also includes recommended assessment methodologies for air toxics, odors, and GHG emissions.

Based on the Guidance, the Project's air quality impacts during construction or operations would be considered significant if emissions generated exceed the thresholds presented in Table 3.3-6. These thresholds of significance are based on the SJVAPCD's New Source Review (NSR) offset requirements and are applied to evaluate regional impacts of project-specific emissions of air pollutants and their impact on the region's ability to reach attainment (SJVAPCD 2015c). The SJVAPCD's attainment plans demonstrate that project specific emissions below the offset thresholds would have a less-than-significant impact on air quality (SJVAPCD 2015c). Thus, the SJVAPCD concludes that use of NSR offset thresholds as its thresholds of significance for criteria pollutants is an appropriate and effective means of promoting consistency in significance determinations within the environmental review process. Therefore, projects with emissions below the thresholds of significance for criteria pollutants would be determined to not conflict or obstruct implementation of the SJVAPCD's air quality plans.

In addition, some projects are required to implement PM₁₀ and NO_x reduction measures as required under SJVAPCD Rule 9510 Indirect Source Review (ISR), which was adopted by the

SJVAPCD in 2005 to reduce the impacts of increased emissions resulting from new land development (SJVAPCD, 2017). SJVAPCD Rule 9510 applies to new development projects that would equal or exceed specific size limits called “applicability thresholds.” The applicability thresholds were established at levels intended to capture projects that emit at least 2 tons of NO_x or 2 tons of PM₁₀ per year (SJVAPCD, 2017).

Air pollutant emissions that would be related to the Orchard Substation Facilities portion of Project construction and operations were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. CalEEMod contains default data specific to each California air basin and quantifies direct emissions from construction and operation (including off-road equipment and on-road vehicle use). CalEEMod uses EMFAC and OFFROAD emission factors to estimate emissions from on-road vehicles and off-road equipment, respectively. The construction module in CalEEMod was used to calculate the emissions associated with the Orchard Substation Facilities portion of Project construction. The CalEEMod output file is included as Attachment 1 of Appendix AIR, *Air Quality Assessment*. As discussed above under the *Methodology and Assumptions* heading, it is assumed that the PG&E Interconnection Facilities portion of the Project would result in the same or lessor amounts of emissions as the Orchard Substation Facilities portion of the Project.

Construction Emissions

The Project’s construction includes site preparation and grading, installation of the access road, drainage and retention basins, foundations/supports, the interconnection facilities, and other electrical system; it also includes the setting of equipment wiring and electrical system installation, and assembly of the accessory components. The Orchard Substation Facilities portion of the Project site is approximately 20 acres and would require the grading of approximately 9 acres. The Orchard Substation Facilities portion of the Project would require the import of roughly 17,000 cubic yards of suitable base material and export of roughly 2,000 cubic yards of excavated materials. Construction of the Orchard Substation Facilities portion of the Project was modelled over a 21-month period beginning in March 2022 and ending in December 2023. Construction is assumed to occur 6 days per week. CalEEMod incorporates the tier status of equipment by default based on the equipment inventory mixture for the given construction year. However, pursuant to APM AQ-1, the Applicant has committed to require that at least 32 percent of all diesel-powered equipment use during the 2022 calendar year of construction of the Orchard Substation Facilities portion of the Project would be equipment that meet USEPA-certified Tier 4 standards. Therefore, the CalEEMod construction “mitigation” scenario was modelled to reflect the Orchard Substation Facilities portion of the Project emissions that would be generated due to the Project’s requirement that 32 percent of all diesel-powered equipment would meet Tier 4 standards. It is assumed that PG&E would be required to make a similar commitment associated with the PG&E Interconnection Facilities portion of the Project to comply with SJVAPCD Rule 9510. Material hauling/truck details along with worker trips and the anticipated construction equipment and durations that would be associated with the Orchard Substation Facilities portion of the Project were provided by the Applicant’s engineer. The construction emissions are presented in **Table 3.3-7, Project Construction Emissions Summary**.

**TABLE 3.3-7
 PROJECT CONSTRUCTION EMISSIONS SUMMARY**

Construction Year/ Significance Criteria	Construction Emissions (tons)					
	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
2022	3.49	2.89	0.33	0.01	3.00	0.26
2023	1.14	1.14	0.13	<0.01	0.12	0.06
Orchard Substation Subtotal	4.63	4.03	0.46	0.01	3.11	0.32
PG&E Interconnect Subtotal*	4.63	4.03	0.46	0.01	3.11	0.32
Total Project Emissions	9.26	8.06	0.92	0.02	6.22	0.64
SJVAPCD Threshold	100	10	10	27	15	15
Significant?	No	No	No	No	No	No

NOTES:

SJVAPCD guidance requires analysis of a 12-month rolling average of emissions. For conservative analysis 2022 and 2023 emissions are combined and used as a proxy for the 12-month rolling average.

* As discussed above under the *Methodology and Assumptions* heading, it is assumed that the PG&E Interconnection Facilities portion of the Project would result in the same or lessor amount of emissions as the Orchard Substation Facilities portion of the Project.

SOURCE: LSPGC, 2021; Appendix AIR\

As shown in Table 3.3-7, total construction emissions of the Orchard Substation Facilities portion of the Project over the 21-month period combined with the construction emissions of the Orchard Substation Facilities portion of the Project would be below the SJVAPCD significance thresholds; therefore, total Project emissions on a rolling 12-month period would be well below the significance thresholds. In addition, on-site emissions of CO, which is the criteria pollutant or precursor that would be generated in the greatest amount by the Project, would average approximately 15 pounds per workday for the Orchard Substation Facilities portion of the Project (see Appendix AIR), or up to approximately 30 pounds per workday for all of the Project including the PG&E Interconnection Facilities; and according to SJVAPCD guidance, it should be concluded that the Project’s emissions would not contribute significantly to an existing violation of the CAAQS or NAAQS. Therefore, the Project would not conflict or obstruct implementation of the SJVAPCD’s air quality plans, and the associated impact would be **less than significant**.

However, it should be noted that NO_x emissions would exceed the Rule 9510 applicability threshold for NO_x of 2 pounds. When estimated NO_x emissions exceed the Rule 9510 applicability threshold, SJVAPCD requires construction equipment greater than 50 horsepower to be reduced by at least 20 percent relative to the average state-wide emissions for the equipment in order for the Project to remain in compliance. Pursuant to implementation of APM AQ-1 (Use of Tier 4 Equipment), total on-site construction equipment-related NO_x emissions for the Orchard Substation Facilities portion of the Project would be 3.61 tons. Without implementation of APM AQ-1 (i.e., using average emission factors for the equipment inventory), total NO_x emissions for the Orchard Substation Facilities portion of the Project would be 4.45 tons (see Appendix AIR). Therefore, with implementation of APM AQ-1, total NO_x emissions for the Orchard Substation Facilities portion of the Project would represent a reduction of approximately 19 percent relative to average equipment emissions without implementation of APM AQ-1. As part of its Rule 9510 permit requirements,

SJVAPCD may require additional equipment emission controls for the Orchard Substation Facilities portion of the Project as well as for the PG&E Interconnection Facilities portion of the Project to be compliant with SJVAPCD Rule 9510.

Operational Emissions

Project operations would begin in 2023. Once operational, the Project would generate minimal air quality emissions. Anticipated operations emissions would primarily be limited to sources such as worker trips, and area sources such as landscaping. The expected daily pollutant generation from these sources associated with the Orchard Substation Facilities portion of the Project was estimated using CalEEMod and are presented in **Table 3.3-8, Operational Emission Summary for the Orchard Substation Facilities.**

**TABLE 3.3-8
OPERATIONAL EMISSION SUMMARY FOR THE ORCHARD SUBSTATION FACILITIES**

Operational Source/ Significance Criteria	Operations (tpy)					
	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
Area	<0.01	<0.01	0.04	<0.01	<0.01	<0.01
Energy	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mobile	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Total	0.01	0.01	0.04	<0.01	<0.01	<0.01
SJVAPCD Threshold	100	10	10	27	15	15
Significant?	No	No	No	No	No	No

NOTES:

tpy = tons per year

SOURCE: LSPGC, 2021; see Appendix AIR

As shown in Table 3.3-8, the Orchard Substation Facilities portion of Project would result in negligible emissions, and with the emissions doubled to incorporate the Orchard Substation Facilities portion of the Project, the criteria pollutant emissions during the Project operations phase would be well below the significance thresholds. Therefore, the Project operations would not conflict with any air quality management plans, and operations related impacts would be less than significant.

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: *Less than Significant.*

CEQA defines *cumulative impacts* as two or more individual impacts which, when considered together, are either significant or “cumulatively considerable,” meaning they add considerably to a significant environmental impact. An adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed.

By its very nature, air pollution is largely a cumulative impact. No single project would likely be sufficient in size, by itself, to result in non-attainment of the regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development within the SJVAB. The non-attainment status of the SJVAB with respect to regional pollutants is a result of past and present development. Future attainment of state and federal ambient air quality standards is a function of successful implementation of SJVAPCD's attainment plans. Consequently, the SJVAPCD's application of thresholds of significance for criteria pollutants is a relevant way to determine whether a project's individual emissions would have a cumulatively significant impact on air quality.

Per CEQA Guidelines Section 15064(h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project would comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (SJVAPCD, 2015c). The SJVAPCD has established thresholds of significance for criteria pollutant and precursor emissions, which are based on NSR offset requirements for stationary sources. Emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to comply with the SJVAPCD's air quality plans and would not contribute a cumulatively considerable increase for these criteria pollutants (SJVAPCD, 2015a).

As shown in Tables 3.3-7 and 3.3-8, Project construction and operational emissions would be less than the SJVAPCD recommended thresholds of significance. Therefore, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment status under an applicable federal or state ambient air quality standard. The cumulative impact with respect to criteria air pollutant emissions would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations: *Less than Significant.*

The nearest sensitive receptor to the Project site is located 1.8 miles to the northeast. Potential harmful airborne pollutants that could be generated by the Project are DPM, criteria pollutants, and Valley Fever contaminated dust. Therefore, each of these is addressed under this criterion with respect to the Project.

Diesel Particulate Matter

Typically, for projects with sensitive receptors more than 1,000 feet away, a health risk assessment (HRA) would not be required. However, in this case, to be conservative, a construction HRA was conducted to determine the impacts associated with the Orchard Substation Facilities from construction-related DPM, which is a TAC. As discussed under *Methodology and Assumptions*, construction emissions from the CalEEMod output were modeled in AERMOD to determine the

DPM concentration at the nearest resident and then worst-case exposure was estimated using OEHHA guidance (OEHHA, 2015). The results of the assessment are presented in **Table 3.3-9, Construction-Related Health Risk Summary for the Orchard Substation Facilities.**

**TABLE 3.3-9
CONSTRUCTION-RELATED HEALTH RISK SUMMARY FOR THE ORCHARD SUBSTATION FACILITIES**

Sensitive Receptor	Cancer Risk (per million)	Chronic Hazard Index (unitless)
MEI Resident	0.02	<0.01
SJVAPCD Threshold*	20	1
Significant?	No	No

NOTES:

* The San Joaquin Valley Air Pollution Control District's current thresholds of significance for toxic air contaminant (TAC) emissions are for operations; however, they are conservatively being applied to construction for the purposes of determining significance.

SOURCE: LSPGC, 2021; see Appendix AIR.

As shown in Table 3.3-9, the health risk impacts associated with the Orchard Substation Facilities construction TAC emissions would be well below the SJVAPCD significance thresholds; and with the cancer risk and chronic hazard index doubled to incorporate the PG&E Interconnection Facilities portion, the Project as a whole would be below the SJVAPCD significance thresholds. Therefore, all health risks associated with exposure of sensitive receptors to DPM would be **less than significant**.

Criteria Pollutants

The health effects that are associated with emissions of criteria pollutants are described above under the Criteria Air Pollutants discussions in Section 3.3.2, *Regulatory Setting*. As described above, compliance with the ambient air quality standards indicates that regional air quality can be considered protective of public health.

As discussed under impact criterion a), construction and operation of the Project would not result in emissions that exceed the SJVAPCD's annual emissions thresholds for any of the air pollutants. Further, the SJVAPCD recommends that the Project be evaluated for potential health impacts to surrounding receptors (on-site and off-site) that would result from operational and multi-year construction if emissions exceed 100 pounds per day of any pollutant, which would require an ambient air quality analysis (AAQA) (SJVAPCD, 2015c). Because the maximum daily emissions would be below the screening threshold for an AAQA, the Project would not contribute to local exceedances of the NAAQS or the CAAQS. As mentioned, these standards are established at health protective levels and include an adequate margin of safety. Therefore, the Project construction and operations would not be anticipated to result in an adverse health effect with respect to emissions criteria air pollutants.

Valley Fever

Valley Fever is a disease that typically affects the respiratory system and is communicated by fungal spores within soil and airborne dust. Therefore, at-risk activities include those that either

create high levels of dust, require workers to be in close contact with soils and dusts, or both. The Project is located within unincorporated Fresno County, which is in California's Central Valley. The Central Valley is the region of California considered to be of highest risk for the development of Valley Fever (CDPH, 2020); therefore, Valley Fever is a health risk of concern in relation to the Project. As discussed above, the nearest sensitive receptors to the Project site are residences located approximately 1.8 miles away. At this distance, dust created at the Project site would not be of great concern. While Valley Fever is a risk for anyone living or working in the Project vicinity, the addition of the Project would not increase this risk for the existing residences. However, for the construction workers and other Project personnel who would be on-site during times of dust transport, risk to their health is a concern.

The Project activities that would result in the greatest risk would be those involving the excavation and transport of soils, such as grading and trenching. These activities, along with localized wind conditions, create the work conditions with the highest risk. According to the CDPH and the CDC, avoiding working in soils and dusty conditions is the best preventative measure. Since some construction workers cannot avoid participating in soil disturbance activities, minimizing fugitive dust as well as other engineering controls become the primary preventative measures. Pursuant to AB 203, the Applicant and PG&E would be required to provide effective awareness training on Valley Fever to all employees annually and before an employee begins work that is reasonably anticipated to cause substantial dust disturbance. In addition, the CDPH Occupational Health Branch and the CDC make recommendations for the protection of workers. The primary protection measures relate to the following: worker training, dust suppression, and personal protective equipment (PPE). With respect to dust suppression, SJVAPCD Rule 8021 would require the Project to reduce visible dust emissions to less than 20 percent opacity (SJVAPCD, 2014). APM AQ-2 (Dust Control Plan) and APM AQ-3 (Valley Fever Worker Awareness Training) and PG&E BMP-6 (Fugitive Dust General) and BMP-7 (San Joaquin Valley AQMD >1 acre of soil disturbing activities) would place the Project in compliance with these regulatory requirements and would ensure that the potential impacts from Valley Fever would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people: *Less than Significant.*

The Project may create temporary construction odors from combustion of diesel fuel in equipment engines but would not be considered significant due to the highly dispersive nature of diesel exhaust and the fact that the nearest residential receptor is approximately 1.8 miles away from the Project site. The Project is not anticipated to result in emissions that could cause long-term odors or other adverse effect during operations. Therefore, the Project would result in a less-than-significant impact related to the generation of odors.

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3.4 Biological Resources

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
IV. BIOLOGICAL RESOURCES — 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.4.1 Environmental Setting

This section describes the existing environment for wildlife, botanical, and wetland resources within and adjacent to the Project site, as well as adjacent habitats that could reasonably be affected by Project construction, operation and maintenance activities (the study area). The analysis in this section is informed by the Biological Resources Technical Report prepared for the Project site (Heritage Environmental, 2021).

Regional Setting

The Project site is located within an unincorporated area of Fresno County directly north of, and adjacent to, the Pacific Gas and Electric (PG&E)-owned Gates Substation. The Project site is located approximately 3.3 miles southwest of the city of Huron. The Project site is located approximately 1 mile northwest of the intersection of South Lassen Avenue (State Route [SR] 269) and West Jayne Avenue, which is approximately 3.5 miles southwest of the City of Huron and approximately 2.5 miles east of Interstate 5 (I-5) in southwest Fresno County. The land to the north, east, and west of the Project site is used for agricultural purposes, and the existing PG&E Gates Substation is located to the south.

The Project is located east of the Coast Range in the Central Valley of California. The Kettleman Hills are located approximately 5 miles south/southwest of the Project site. The Guijarral Hills are located approximately 4.3 miles west of the Project site. The San Luis Canal, which connects to the California Aqueduct, is located approximately 4 miles east of the Project site. Elevations within the Project site and immediately surrounding area are flat and range from 387 to 406 feet above sea level (U.S. Geological Survey, 2021).

Vegetation Communities

Due to the site history of active agricultural use, the Project site only supports non-native vegetation communities; no native vegetation communities exist within the Project site. Since there are no natural vegetation communities, no formal vegetation classification system was used. A vacant area owned by PG&E immediately south of the Project site and north of the PG&E Gates Substation is unvegetated and disturbed. The Project site and much of the surrounding region are dominated by agricultural land (vineyards, orchards, and row crops) and disturbed or developed areas such as the PG&E Gates Substation, solar facilities, and roads. All components of the Project would be located on existing agricultural (vineyard) and disturbed lands. Project access roads are located on existing and regularly used dirt roads (Heritage Environmental, 2021).

Upland Communities

Agriculture – Vineyard. The 20-acre Project site is primarily located within the vineyard cover type. Vineyards are comprised entirely of grape vines and bare ground.

Disturbed. Disturbed areas occur within the proposed access road alignment on South Trinity Avenue. Such areas that support no vegetation or are sparsely distributed non-native vegetation due to human activities. This cover type includes developed areas such as the PG&E Gates Substation, paved roads and compacted dirt roads, and frequently disturbed (disked) lands immediately north and southeast of the PG&E Gates Substation that support only sparse, non-native vegetation communities.

Agriculture – Row Crops. Row crops do not occur on the Project site but are present in the buffer zone of the study area. Such areas are comprised entirely of frequently harvested crops including vegetables and alfalfa. Row crops are currently found immediately east of the Project across South Trinity Avenue as well as immediately south and southeast of the PG&E Gates Substation across West Jayne Avenue (Heritage Environmental, 2021).

Agriculture – Orchard. Orchards do not occur on the Project site, but are present in the buffer zone of the study area. Comprised entirely of citrus and nut trees, orchards occur immediately east of the PG&E Gates Substation and east of the Proposed Project's access road along South Trinity Avenue (Heritage Environmental, 2021).

Wetland Communities

There are no significant aquatic resources or potentially jurisdictional features within the Project site or study area. There are two small non-jurisdictional water conveyance features (agricultural drainage ditches) adjacent to the southern and northern sides of West Jayne Avenue. These

ditches support no riparian vegetation and only have running water occasionally due to run-off from agricultural fields following irrigation (Heritage Environmental, 2021). These features would not be considered jurisdictional by the U.S. Army Corps of Engineers (ACOE), the Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW).

Sensitive Natural Communities

CDFW provides an inventory of vegetation communities that are considered sensitive by state and federal resource agencies, academic institutions, and various conservation groups in the California Natural Diversity Data Base (CNDDB). Determination of the sensitivity level of the vegetation communities is based on the Nature Conservancy Heritage Program Status Ranks, which ranks vegetation communities on a global and statewide basis according to the number and size of remaining occurrences and recognized threats.

There are no sensitive natural vegetation communities that meet the definition of a biological resource under California Environmental Quality Act (CEQA) (i.e., rare, designated or otherwise protected) on the project site.

Special-Status Species

Special-status species include those listed as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as “fully protected” under the California Fish and Game Code; animals designated as “Species of Special Concern” by CDFW (formerly California Department of Fish and Game); and plants considered rare or endangered by California Native Plant Society (CNPS).

CEQA Guidelines Section 15380 provides that a plant or animal species may be treated as “Rare or Endangered” even if not listed on one of the official lists if, for example, it is likely to become endangered in the foreseeable future. As species of plants and animals become restricted in range and limited in population numbers, species may become listed or candidates for listing as Endangered or Threatened and become recognized under CEQA as a significant resource.

Table 3.4-1, *Special-Status Species with Potential to Occur within the Project Site*, assesses plant and wildlife species occurring within approximately 5 miles of the Project site for their potential to occur on the site. Local occurrences are shown in **Figure 3.4-1, Special-status Species Occurrences in the Project Vicinity**. Special-status plant and wildlife species identified during the literature and database search were assessed as to their potential to occur as follows:

- **Not Present:** The study area does not support suitable habitat for the species or the known range for the species is outside of the study area.
- **Unlikely:** The study area provides limited suitable habitat for the species. The known range for the species may be outside of the study area.
- **Moderate Potential:** The study area provides suitable habitat for the species. The known range for the species includes the study area.

- **High Potential:** The study area provides preferred habitat conditions for the species or known populations occur in the immediate vicinity.
- **Present:** Species was observed within the study area during biological surveys or other site visits.

**TABLE 3.4-1
 SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR WITHIN THE PROJECT SITE**

Species	Status Fed/State/CNPS*	Habitat	Potential to Occur
Plants			
<i>Atriplex depressa</i> brittlescale	--/--/1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools; alkaline, clay. Annual herb. Blooms Apr–Oct. Elevation 3–1050 m.	Not Present. Suitable meadow, scrub, playa or grassland habitat is not present at the Project site. There are no occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Caulanthus californicus</i> <i>California jewelflower</i>	FE/SE/1B.1	Non-native grassland, upper Sonoran scrub, and juniper woodland. Typically occurs in areas with dense herbaceous cover and in primarily subalkaline, sandy loams. Annual herb. Elevation 240 and 2,950 feet. Blooms February through May.	Unlikely. The Project site lacks grassland, scrub or woodland habitat. Nearest occurrence approximately 5 miles north of the Project site (CDFW 2021).
<i>Caulanthus lemmoni</i> Lemmon's jewelflower	--/--/1B.2	Grasslands, chaparral and scrub habitats. Annual herb. Elevation 260 to 3,280 feet. Blooms March through May.	Not Present. Suitable scrub, chaparral or grassland habitat is not present on-site. There are no occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Deinandra halliana</i> Hall's tarplant	--/--/1B.2	Clay, sometimes alkaline; chenopod scrub; cismontane woodland; valley and foothill grassland. Annual herb. Blooms Apr–May. Elevation 260–950 m.	Not Present. Suitable scrub, alkaline clay, or grassland habitat is not present on-site. There are no occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Delphinium recurvatum</i> recurved larkspur	--/--/1B.2	Chenopod scrub, meadows and seeps, playa, valley and foothill grassland; alkaline. Perennial herb. Blooms Mar–June. Elevation 10–2592 m.	Not Present. Suitable scrub, woodland, alkali playa or grassland habitat is not present on-site. There are no occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Eremalche parryi</i> <i>ssp. kernensis</i> Kern mallow	FE/--/1B.2	Valley saltbush scrub habitats in alkaline sandy loam or clay soil. Annual herb. Elevation 315 to 900 feet. Blooms March to May	Not Present. Suitable saltbrush scrub habitat is not present on the Project site. No occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Lasthenia chrysantha</i> alkali-sink goldfields	--/--/1B.1	Valley grassland, alkali sink, wetland-riparian. Annual herb. Blooms Feb–June.	Not Present. Suitable alkali sink, grassland or riparian habitat is not present on-site. No occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Layia heterotricha</i> Pale yellow tidy-tips	--/--/1B.1	Chenopod scrub, valley and foothill grassland (alkaline clay). Annual herb. Blooms Mar–Apr. Elevation 492–2297 m.	Not Present. Suitable scrub, alkali or grassland habitat is not present on-site. No occurrences within approximately 5 miles of the Project site (CDFW 2021).

TABLE 3.4-1 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR WITHIN THE PROJECT SITE

Species	Status Fed/State/CNPS*	Habitat	Potential to Occur
Plants (cont.)			
<i>Lepidium jaredii</i> ssp. <i>album</i> Panoche peppergrass	--/1B.2	Valley and foothill grassland (steep slopes, clay). Annual herb. Blooms Feb– June. Elevation 607–902 m.	Not Present. Suitable grassland habitat is not present on-site. Also, the site is outside of the species' known elevation range. No occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Madia radiata</i> <i>Showy golden madia</i>	--/1B.1	Cismontane woodland, valley and foothill grassland. Annual herb. Blooms Mar-May. Elevation 25 - 1215 m.	Not Present. Site lacks suitable woodland or grassland habitat for this species.
<i>Monolopia congdonii</i> San Joaquin woollythreads	FE--/1B.2	Chenopod scrub, valley and foothill grassland (sandy). Annual herb. Blooms Feb–May. Elevation 197–2625 m.	Unlikely. Project site lacks suitable scrub or sandy grassland habitat. Nearest occurrences approximately 5 miles north of the Project site (CDFW 2021).
<i>Senecio aphanactis</i> <i>Chaparral ragwort</i>	--/2B.2	Marshes and swamps (assorted shallow freshwater). Perennial rhizomatous herb. Blooms May–Oct (Nov). Elevation 0–2133 m.	Not Present. Project site lacks marsh and swamp habitat. There are no occurrences within approximately 5 miles of the Project site (CDFW 2021).
Reptiles and Amphibians			
<i>Anniella pulchra</i> California legless lizard	--/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils.	Unlikely. The Project site consists of actively farmed agricultural lands and disturbed areas that do not provide suitable habitat for this species.
<i>Arizona elegans occidentalis</i> <i>California glossy snake</i>	--/SSC	Chaparral, sagebush, valley-foothill hardwood, pine-juniper, and annual grasslands, in small mammal burrows and rock outcrops.	Unlikely. The Project site consists of actively farmed agricultural areas and disturbed areas that do not provide suitable habitat for this species.
<i>Gambelia sila</i> blunt-nosed leopard lizard	FE/SE, FP	Sparsely vegetated alkali and desert scrubs, including semi-arid grasslands, alkali flats, and washes.	Unlikely. The Project site consists of active agricultural areas and disturbed land. The nearest CNDDDB occurrences were recorded approximately 4-5 miles west and southwest, primarily near native vegetation of the Kettleman Hills (CDFW 2021).
<i>Masticophis flagellum ruddocki</i> San Joaquin whipsnake	--/SSC	Open, dry, treeless areas including grassland and saltbush scrub. This species needs mammal burrows for refuge.	Unlikely. The Project site consists of actively farmed agricultural lands and disturbed areas that do not provide suitable habitat for this species.
<i>Rana boylei</i> Foothill yellow- legged frog	--/SE	Rivers and streams with rocky substrate in conifer, coastal scrub, mixed chaparral, riparian or wet meadow habitat.	Not Present. The Project site lacks suitable aquatic habitat for this species. No CNDDDB occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Spea hammondi</i> western spadefoot	--/SSC	Primarily grassland and vernal pools, but also ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture.	Not Present. The Project site lacks suitable aquatic habitat for this species. The nearest CNDDDB occurrence is approximately 5 miles north of the Project site (CDFW 2021).

**TABLE 3.4-1 (CONTINUED)
 SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR WITHIN THE PROJECT SITE**

Species	Status Fed/State/CNPS*	Habitat	Potential to Occur
Birds			
<i>Agelaius tricolor</i> tricolored blackbird	--/CE	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry and cultivated grains; forages in grasslands, woodland, and agricultural lands.	Unlikely. The Project site lacks suitable nesting habitat, though it may provide foraging areas within cultivated agricultural lands. Nearest CNDDDB occurrence 5 miles southeast of the Project site (CDFW 2021).
<i>Asio otis</i> long-eared owl	--/SSC	Grassland, prairies, dunes, meadows, irrigated lands, and saline and freshwater emergent wetlands. Nests on ground in salt or freshwater marshes, irrigated grain or alfalfa fields, ungrazed grasslands, and old pastures.	Unlikely. This species may forage in agricultural fields within the Project site but suitable nesting habitat is not present. No occurrences within approximately 5 miles of the Project site (CDFW 2021).
<i>Athene cunicularia</i> burrowing owl	--/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows. This species requires short vegetation with sparse shrubs and burrows for roosting and nesting.	Unlikely. The Project site has minimal habitat features to support this species. No suitable burrows observed during surveys. The nearest CNDDDB occurrences approximately 4.5 miles from the Project site (CDFW 2021).
<i>Buteo swainsoni</i> Swainson's hawk	--/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture.	Unlikely. No suitable nest trees on the Project site; potential foraging habitat in the row crops in the vicinity of the Project. No Swainson's hawks observed during protocol surveys for this Project. Nearest CNDDDB occurrence approximately 5 miles northeast (CDFW 2021).
<i>Coccyzus americanus occidentalis</i> <i>Western yellow-billed cuckoo</i>	FT/SE	Nests in dense riparian woodlands and forest with well-developed understories.	Not Present. Suitable riparian habitat is absent from the Project site.
<i>Lanius ludovicianus</i> loggerhead shrike	--/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches.	Moderate Potential. The Project site contains suitable foraging habitat and barbed wire in the agricultural fields, and in disturbed areas north of Gates Substation. Limited nest sites are available due to agricultural use of the site. Nearest CNDDDB occurrence approximately 3.75 miles southeast.
<i>Toxostoma lecontei</i> LeConte's thrasher	--/SSC	Found in sandy, open deserts with saltbush, shadscale, cholla cactus, creosote, yucca, or mesquite in flat or rolling landscapes of arroyos, open flats, or dunes.	Unlikely. The Project site consists of disturbed agricultural land which is not suitable habitat for this species. It may occasionally fly over or forage in the vicinity.
<i>Xanthocephalus</i> Yellow-headed blackbird	--/SSC	Nests in marshes and prairie meadows, and in winter forages in croplands, ranchlands and savanna. Found in large flocks with other blackbirds.	Unlikely. The Project site lacks suitable marsh nesting habitat, though it may provide foraging areas within cultivated agricultural lands. Nearest CNDDDB occurrence 5 miles southeast of the Project site (CDFW 2021).

TABLE 3.4-1 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR WITHIN THE PROJECT SITE

Species	Status Fed/State/CNPS*	Habitat	Potential to Occur
Mammals			
<i>Ammospermophilus nelsoni</i> Nelson's antelope squirrel	--/ST	Arid annual grassland or shrubland with rolling hills or sandy washes, with or without shrubs including saltbush (<i>Atriplex</i> spp.), California jointfir (<i>Ephedra californica</i>), bladderpod (<i>Physaria</i> spp.), goldenbush (<i>Astereae</i>), snakeweed (<i>Gutierrezia</i> spp.) Prefers fine-textured soils.	Unlikely. Project site is highly disturbed and lacks suitable grassland or shrubland habitat. Nearest CNDDDB occurrence approximately 4.5 miles north of the Project site, west of I-5 (CDFW 2021).
<i>Dipodomys nitratoides brevinasus</i> Short-nosed kangaroo rat	--/SSC	Burrows in loose soils with sparse vegetation on flat or gentlyrolling terrain in grassland or scrubland.	Unlikely. The Project site lacks suitable grassland or scrubland habitat. Nearest CNDDDB occurrence approximately 5 miles west in the Gujarral Hills (CDFW 2021).
<i>Eumops perotis californicus</i> western mastiff bat	--/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; Suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops, trees, tunnels, and buildings.	Unlikely. No suitable crevices or caves for roosting. The Project site provides suitable foraging habitat over agricultural fields. Nearest CNDDDB occurrence approximately 4.5 miles north (CDFW 2021).
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	--/SSC	Low, open scrub, and semi-scrub habitats in arid semi-desert associations.	Unlikely. The Project site is highly disturbed and lacks shrubland communities typically associated with this species. Nearest CNDDDB occurrence approximately 5 miles south of the Project site (CDFW 2021).
<i>Taxidea taxus</i> American badger	--/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils.	Unlikely. Badgers burrow in open areas, including ranchlands and agricultural fields; however, the Project site is regularly tilled and surrounded by other agricultural sites. Nearest CNDDDB occurrence 4.5 miles north of the Project site (CDFW 2021).
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/ST	Grasslands and scrublands, including disturbed areas; oak woodland, alkali sink scrubland, vernal pools, and alkali meadows.	Unlikely. Low potential to occur within the study area based on high level of disturbance and lack of suitable grassland habitat for denning in the vicinity. May sporadically traverse the area between areas of better habitat. No CNDDDB occurrences within 3 miles but several records within 3 and 5 miles (CDFW 2021).

NOTES:

USGS 7.5-minute quads Gujarral Hills, La Cima, Avenal, Huron, Harris Ranch, Calflax, Domengine Ranch, Kreyenhagen Hills, Coalinga

* STATUS LEGEND:

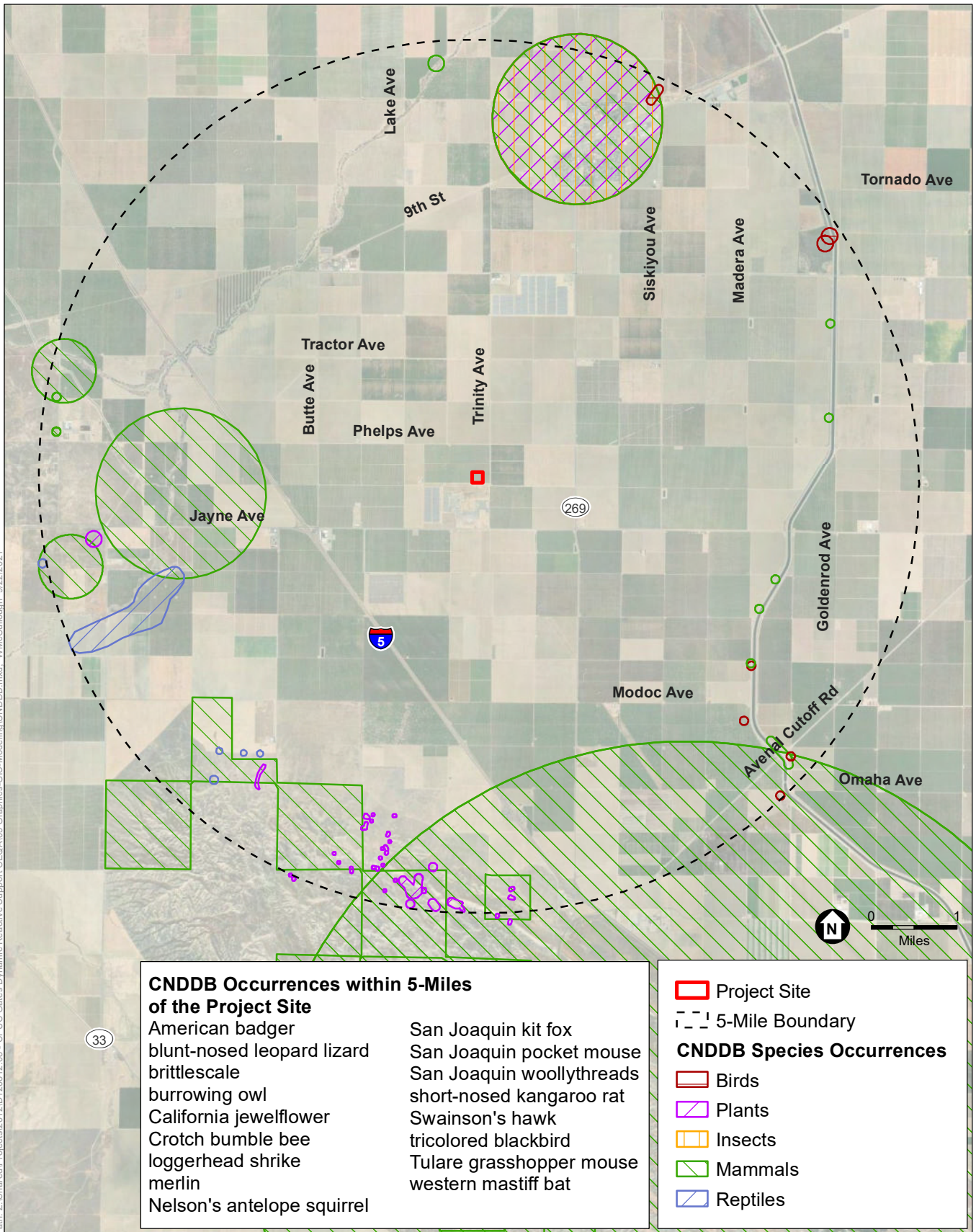
FE = Federally Endangered.
 FT = Federally Threatened.
 FP = CDFW Fully Protected Species.
 FDL = Federally Delisted.
 SE = State Endangered.
 ST = State Threatened.
 SSC = California Species of Concern.
 SDL = State Delisted.
 BCC = Bird of Conservation Concern

CRPR:

1B: Plants rare, threatened, or endangered in California and elsewhere
 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
 4: Plants of limited distribution – watch list

THREAT RANK:

1 – Seriously threatened in California
 2 – Fairly threatened in California
 3 – Fairly threatened in California and elsewhere



SOURCE: LSPGC, 2021; CDFW, 2021

CPUC Gates Dynamic Reactive Support

Figure 3.4-1

Special-status Species Occurrences in the Project Vicinity

Special-Status Plants

Special-status plant species are those which are listed, or are candidates to be listed, by the ESA or CESA, identified as rare by the NPPA, and plants considered by the CNPS to be rare, threatened, or endangered in California. All special-status species plants listed in the IPaC (USFWS 2021), CNPS (CNPS 2021), and CNDDDB (CDFW 2021) occurrence records within the 5-mile Project region were evaluated for their potential to occur within the study area based on available habitat, elevation, and soils (Table 3.4-1). CNDDDB records are shown on Figure 3.4-1. No special-status species plants were observed within the study area during biological surveys, although the surveys were not conducted within the blooming or phenological identification period for most species. Due to the high level of disturbance associated with agricultural operations and the PG&E Gates Substation, as well as the lack of native vegetation, it was concluded that the study area does not contain suitable habitat for special-status plant species, and none are expected to occur (Heritage Environmental, 2021). There is no USFWS critical habitat for special-status plants on the Project site (USFWS 2021).

Special-Status Wildlife

Special-status wildlife species are those that are listed or are candidates to be listed by the ESA or CESA, species protected by the BGEPA, CDFW Fully Protected and Species of Special Concern, Birds of Conservation Concern, and bats considered by the WBWG to be “High” or “Medium” priority. All special-status wildlife species identified in the IPaC report (USFWS 2021) and CNDDDB (CDFW 2021) occurrence records within the 5-mile Project vicinity were evaluated for their potential to occur within the study area based on available habitat (Table 3.4-1). CNDDDB records are shown on Figure 3.4-1. There is no USFWS critical habitat for special-status wildlife on the Project (USFWS 2021).

Only one special-status bird (loggerhead shrike, *Lanius ludovicianus*, CDFW Species of Special Concern) was identified as having moderate potential to forage on the project site. Several common raptor species (protected by the MBTA and California Fish and Game Code) also have moderate to high potential to forage within the project site. Other species that were analyzed for occurrence in the study area (Table 3.4-1) are unlikely to occur or not expected to occur. The loggerhead shrike and common raptor species that may be encountered within the study area are described in more detail below.

Swainson’s hawk is listed as a California state-threatened species under the CESA. CDFW requested that Swainson’s hawk surveys be conducted as recommended in the Swainson’s Hawk Technical Advisory Committee’s approach, “Recommended Timing and Methodology for SWHA Nesting Surveys in California’s Central Valley,” (2000) within a 0.5-mile buffer around the Project. No Swainson’s hawk nesting habitat, individuals, or nests were observed within the 0.5-mile buffer (Heritage Environmental, 2021). The Project site also provides limited suitable foraging and nesting habitat for non-special-status migratory birds, as well as foraging habitat for bat species, though roosting habitat is not present.

Swainson's Hawk

The Swainson's hawk is state-listed as a threatened species in California. It nests in the Central Valley, Klamath Basin, and some mountain areas, where it prefers stands of trees in agricultural environments, oak savanna, riparian areas or juniper-sage flats. In the San Joaquin Valley, it typically nests in riparian trees in isolated clusters, often near rural residences or agricultural fields. Swainson's hawk forages in crop fields in the Central Valley, as well as grasslands, rangelands, and fallow agricultural fields. It has a moderate potential to forage over the Project site but is not likely to nest there.

Protocol-level surveys for Swainson's hawk were conducted according to a CDFW-approved survey plan, within a 0.5-mile buffer around the Project site (the 0.5-mile buffer was placed around Gates Substation and the entire parcel that the Project would be located on) (Heritage Environmental, 2021). All potential nest trees and shrubs within the 0.5-mile radius were surveyed for the presence of Swainson's hawk nests. A total of seven surveys were conducted from April 5 to July 30, 2020. No Swainson's hawk nesting habitat, individuals, or nests were observed during the surveys. Eight nests of other avian species were discovered; all of these nests were located on transmission towers. Four of the nests were active common raven nests (*Corvus corax*), two nests were active red-tailed hawk nests, and two nests were inactive but were assumed to be common raven nests (Heritage Environmental, 2021).

Other Raptors

California raptors are protected under Fish and Game Code section 3503.5, which protects individual birds and active raptors nests. Common raptor species that may forage in the project area include red-tailed hawk, barn owl (*Tyto alba*), great-horned owl (*Bubo virginianus*), turkey vulture (*Cathartes aura*), and American kestrel (*Falco sparverius*). The Central Valley exhibits high wintering densities of several raptor species, such as American kestrels and red-tailed hawks. Both foraging and nesting individuals have the potential to occur within the study area.

Two active red-tailed hawk nests were observed during Swainson's hawk surveys on transmission structures within 0.5-mile of the Project site (one approximately 750 feet north, one approximately 0.5 mile northwest). These nests both had young fledge during the 2020 season. The only other raptor species that was observed during field surveys was great horned owl. It is anticipated that raptors would most likely nest on transmission towers in the area, due to the lack of other suitable nesting substrates.

Loggerhead Shrike

The loggerhead shrike inhabits agricultural fields, grasslands, rangelands, mowed areas and open woodlands and feeds on a variety of invertebrate and vertebrate prey, including small birds that it hunts from perches and impales on sharp objects, such as thorns and barbed-wire fences. Throughout most of the southern part of its range in the southern U.S. and Mexico, the loggerhead shrike is non-migratory. It typically nests in isolated trees or large shrubs, and uses the same habitats all year (Humble, 2008). Loggerhead shrikes have a moderate potential to use the study area for foraging. There are barbed wire fences that surround nearby agricultural fields and chain link fences that surround the PG&E Gates Substation as well as posts throughout the vineyard areas that could provide perching opportunities for hunting loggerhead shrikes. There

are also numerous potential prey species in the area such as insects, small mammals, birds, and reptiles found in the vineyards, orchards, and row crops. Loggerhead shrikes are unlikely to use the study area for nesting due to the limited amount of suitable nesting substrate. No loggerhead shrikes were observed during any of the site biological surveys (Heritage Environmental, 2021). The nearest known CNDDDB occurrence was recorded along the San Luis Canal approximately 3.75 miles to the southeast of the Project (CDFW, 2021).

San Joaquin Kit Fox

The San Joaquin kit fox is a federal endangered and state threatened species. It is a year-round resident of arid and semi-arid regions of the San Joaquin Valley as well as lower elevations of the Sierra Nevada foothills and Coast Ranges. Kit fox mostly inhabit non-irrigated grasslands but may also occur in scrub habitats (USFWS, 1998). San Joaquin kit fox may venture into agricultural lands for dispersal or foraging, but are unlikely to reside there due to frequent disturbance. There are numerous kit fox records within 3 to 5 miles of the Project site in the immediate vicinity of the San Luis Canal, but none closer than 3 miles (CDFW, 2021). Given the relative scarcity of suitable prey and high level of disturbance on-site, San Joaquin kit fox is unlikely to utilize the site for anything other than an infrequent transient basis.

Wildlife Movement and Corridors

Wildlife migration corridors connect suitable wildlife habitats in a region that would otherwise be fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g., canyon drainages, ridgelines, or riparian areas) may provide corridors for wildlife travel. Wildlife corridors facilitate dispersal and access to mates, food, and water. CEQA guidelines require that project proponents disclose and mitigate for significant impacts on wildlife corridors. Impacts to wildlife corridors can harm individuals of migrating species, and increase fragmentation between populations. Several riparian corridors within 5 miles of the Project site could potentially be used as movement corridors: Los Gatos Creek is located approximately 3.2 miles to the northwest. Zapato Chino Creek joins Los Gatos Creek approximately 3.75 miles west-northwest, flowing from the Coast Range to the southwest. The San Luis Canal is located approximately four miles east. No potential terrestrial wildlife migration corridors exist within the Project site or study area. The level of disturbance from the existing PG&E Gates Substation, solar facilities, roads and agricultural operations in the immediate vicinity of the Project limit the potential for the area to be used for migration.

The Project lies within the Pacific Flyway – an important north-south bird migration corridor that runs along the Pacific coast of the Americas west of the Rocky Mountains. The Pacific Flyway links breeding grounds to the north with wintering areas to the south, and is used by many species of birds during migration. California's Central Valley is often used as a stopover or wintering area. The study area consists of agricultural and disturbed lands, limiting the potential for avian species to stopover during migration, but some species may forage in nearby agricultural fields (Heritage Environmental, 2021).

3.4.2 Regulatory Setting

Federal

Endangered Species Act of 1973 (FESA), as amended (16 U.S.C. §§1531-1543)

The FESA and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. In addition, the FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA also provides a program for the conservation and recovery of threatened and endangered species as well as the conservation of designated critical habitat that USFWS determines is required for the survival and recovery of these listed species.

Section 9 lists those actions that are prohibited under the FESA. The definition of “take” includes to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Although unauthorized take of a listed species is prohibited, take may be allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without special exemption. The definition of “harm” includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. “Harass” is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit.

Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§703-711)

The MBTA is the domestic law that affirms and implements a commitment by the U.S. to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA makes it unlawful at any time, by any means, or in any manner to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season, whether intentional or incidental.

Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. §668)

The federal Bald and Golden Eagle Protection Act of 1940 protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this act. Take of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” (16 U.S.C. §668c). “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior (72 Fed. Reg. 31132; 50 CFR §22.3).

State

California Endangered Species Act (CESA) (Fish and Game Code §2050 et seq.)

The CESA establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a listed species under both the CESA and the FESA, compliance with the FESA would satisfy the CESA if CDFW determines that the federal incidental take authorization is “consistent” with the CESA under Fish and Game Code Section 2080.1. Before a project results in take of a species listed under the CESA, a take permit must be issued under Section 2081(b).

Fish and Game Code §§2080, 2081

Section 2080 of the Fish and Game Code states, “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the [State Fish and Game] Commission determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.” Pursuant to Section 2081, CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding, if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by CDFW. CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Fish and Game Code §§3503, 3503.5, and 3513

Under these sections of the Fish and Game Code, a project operator is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds; or the taking of any nongame bird pursuant to Fish and Game Code section 3800, whether intentional or incidental.

California Environmental Quality Act Guidelines §15380

In addition to the protections provided by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species nonetheless may be considered rare or endangered for purposes of CEQA if the species can be shown to meet certain specified criteria:

- (A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

- (B) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the Federal Endangered Species Act.

Native Plant Protection Act (NPPA) (Fish and Game Code §§1900-1913)

California’s NPPA requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of endangered or rare plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use in areas that support listed plants.

Local

Fresno County 2000 General Plan

The Fresno County General Plan (Fresno County, 2000) outlines several policies intended for the protection of biological resources County-wide, including the following, which apply to the Project:

Policy OS-E.1: The County shall support efforts to avoid the “net” loss of important wildlife habitat where practicable. In cases where habitat loss cannot be avoided, the County shall impose adequate mitigation for the loss of wildlife habitat that is critical to supporting special-status species and/or other valuable or unique wildlife resources. Mitigation shall be at sufficient ratios to replace the function, and value of the habitat that was removed or degraded. Mitigation may be achieved through any combination of creation, restoration, conservation easements, and/or mitigation banking. Conservation easements should include provisions for maintenance and management in perpetuity. The County shall recommend coordination with the U.S. Fish and Wildlife Service and the California Department of Fish and Game to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed. Important habitat and habitat components include nesting, breeding, and foraging areas, important spawning grounds, migratory routes, migratory stopover areas, oak woodlands, vernal pools, wildlife movement corridors, and other unique wildlife habitats (e.g., alkali scrub) critical to protecting and sustaining wildlife populations.

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

Policy OS-E.3: The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the value of the habitat for wildlife is maintained.

Policy OS-E.4: The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by the California Department of Fish and Game officials and the U.S. Fish and Wildlife Service.

Policy OS-E.9: Prior to approval of discretionary development permits, the County shall require, as part of any required environmental review process, a biological resources

evaluation of the project site by a qualified biologist. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant resources and/or special-status plants or animals. Such evaluation will consider the potential for significant impact on these resources and will either identify feasible mitigation measures or indicate why mitigation is not feasible.

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

Policy OS-F.7: The County should encourage landowners to maintain natural vegetation or plant suitable vegetation along fence lines, drainage and irrigation ditches and on unused or marginal land for the benefit of wildlife.

Policy LU-B.13: In conjunction with environmental reviews under CEQA, the County shall require applicants to identify biological resources to determine if there are sensitive and/or important flora and fauna that require special protection measures.

Program LU-A.C: The County shall develop and implement guidelines for design and maintenance of buffers to be required when new non-agricultural uses are approved in agricultural areas. Buffer design and maintenance guidelines shall include, but not be limited to, the following:

- a. Buffers shall be physically and biologically designed to avoid conflicts between agriculture and non-agricultural uses.
- b. Buffers shall be located on the parcel for which a permit is sought and shall protect the maximum amount of farmable land.
- c. Buffers generally shall consist of a physical separation between agricultural and non-agricultural uses. The appropriate width shall be determined on a site-by-site basis taking into account the type of existing agricultural uses, the nature of the proposed development, the natural features of the site, and any other factors that affect the specific situation.
- d. Appropriate types of land uses for buffers include compatible agriculture, open space and recreational uses such as parks and golf courses, industrial uses, and cemeteries.
- e. The County may condition its approval of a project on the ongoing maintenance of buffers.

Fresno County Code

Chapter 13.12 – Trees and Shrubs

This section establishes permit rules for tree planting and landscaping, including species of trees, planting locations and irrigation regimes.

PG&E San Joaquin Valley Operations and Maintenance Habitat Conservation Plan

The Project is located within PG&E's San Joaquin Valley Operations and Maintenance Habitat Conservation Plan (SJVHCP) Area. The Plan allows PG&E to continue its San Joaquin Valley operations and maintenance programs in conformity with the requirements of federal and state endangered species laws and the California Fish and Game Code. The Plan requires all contractors to complete required HCP training to work in the HCP Plan Area. Construction activities must follow SJVHCP General Avoidance and Minimization Measures (AMMs) 1-11 and any additional measures, where identified (see below, e.g., Nesting Birds).

3.4.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following biological resources-specific applicant proposed measures (APMs) would be implemented by the Project.

- **APM BIO-1:** Speed of vehicles driving along proposed access roads and on the Project site during construction and O&M would be limited to 15 mph. In addition, construction and maintenance employees would be advised that care should be exercised when commuting to and from the Proposed Project area to reduce accidents and animal road mortality.
- **APM BIO-2:** Conductors and ground wires would be spaced sufficiently apart so that raptors cannot contact two conductors or one conductor and a ground wire causing electrocution (APLIC 2006), or raptor protection would be installed subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines.
- **APM BIO-3:** Appropriate methods to reduce the risks of avian collisions would be incorporated into the Project's design (APLIC, 2012), subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines.
- **APM BIO-4:** If feasible, the Applicant would avoid construction during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season, the Applicant would perform a survey in the area where the work is to occur. This survey would be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified, a suitable construction buffer would be implemented to ensure that the nesting or breeding activities are not substantially adversely affected. If the nesting or breeding activities are being conducted by a federal- or state-listed species, the Applicant would consult with the USFWS and CDFW as necessary. Monitoring of the nest would continue until the birds have fledged or construction is no longer occurring on the site. If an inactive nest is identified, careful nest removal under the supervision and direction of qualified biologists would occur wherever feasible.
- **APM BIO-5:** If a raptor nest is observed during pre-construction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated

with the Project are disturbing or disrupting nesting or breeding activities, the monitor would make recommendations to reduce noise or disturbance in the vicinity of the nest.

- **APM BIO-6:** All excavated holes or trenches that are not be filled at the end of a workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife species.
- **APM BIO-7:** The use of outdoor lighting during construction and O&M of the Orchard Substation would be minimized whenever practicable.
- **APM BIO-8:** A WEAP would be implemented to educate all construction and O&M workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction or O&M activities.

PG&E Construction Measures

The following biological resources-specific avoidance and minimization measures (AMMs) and best management practices (BMPs) would be implemented by PG&E during construction of the Interconnection Facilities.

- **AMM-1:** Train employees and contractors in environmental regulations and guidelines to avoid or reduce effects on covered species.
- **AMM-4:** Do not exceed a speed limit of 15 mph on ROWs or unpaved roads within sensitive land cover types.
- **AMM-7:** In areas of high risk of wildlife electrocution, use insulated jumper wires, animal guards for equipment insulator bushings, or construct lines to follow the Bird and Wildlife Protection Standards.
- **AMM- 12: San Joaquin kit fox.** If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided where possible. However, if dens are located within the proposed work area and cannot be avoided during construction, qualified biologists will determine if the dens are occupied. If unoccupied, the qualified biologist will remove these dens by hand excavating them in accordance with USFWS procedures (U.S. Fish and Wildlife Service 1999). Exclusion zones will be implemented following USFWS procedures (U.S. Fish and Wildlife Service 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be as follows: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and CDFW. Pipes will be capped and exit ramps will also be installed in these areas to avoid direct mortality.
- **BMP-1: Nesting Birds.** If work is anticipated to occur within the nesting bird season (February–September), nesting birds, including raptors and other species protected under the Migratory Bird Treaty Act, may be impacted. If active nests are discovered, exclusionary measures and or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. For nests discovered during construction, PG&E implements Work Procedure (WP) 2321 to identify and avoid impacts to nesting birds. WP 2321 generally requires assistance from the project biologist to determine if the construction action will impact the nest, and if so, identify whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E project biologist.

- **BMP-19: Bio Survey.** A pre-activity survey (PAS) must be performed within 30 days of the construction start date to determine the presence of covered species. Results of the PAS will determine if any additional requirements, including monitoring and species specific AMMs, need to be implemented at these locations during construction. Any identified avoidance measures will be provided to construction crews. Avoidance measures must be adhered to during construction. Contact the PG&E project Biologist at least 30-days prior to start of any project activities, including mobilization and staging of equipment materials.

3.4.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on biological resources. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities, and incorporates both applicant proposed measures and PG&E-construction measures for their respective facilities.

Direct and Indirect Effects

- 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: *Less than Significant with Mitigation.***

Special-Status Plants

No special-status or rare plants are likely to be present within the study area for the Project, due to high levels of disturbance; therefore, no impacts would occur.

Special-Status Wildlife

Raptors

It is possible that raptors nesting in the vicinity of the Project site may be impacted by noise and disturbance resulting from project construction. Disturbance can cause adults to leave nests for long periods of time, or even abandon them. The loss of active common raptor nests would be a significant impact. However, **APM BIO-5** and **BMP-1** would require nest monitoring and protective measures during construction, to reduce potential impacts on nesting raptors to a less-than-significant level without mitigation. In addition, **BMP 19** would require pre-construction survey for the presence of special-status species. No special-status raptor species were identified as having a moderate or greater likelihood of nesting in the study area; therefore, no impacts would occur to such species. The loss of foraging habitat for raptors is considered less than significant due to the small size of the Project (approximately 20 acres). The Applicant would return all areas (including the borrow area) that are temporarily disturbed by Project activities to approximate pre-construction conditions.

If raptors were present on or near the site during construction, operation, or decommissioning of 500 kV interconnection transmission lines, circuits, circuit breakers, towers, or lightning shield

mast structures, or structures associated with the STATCOM and switchyard, they could experience mortality or injury from disturbance or collision with project facilities and equipment including transmission poles or wires. Raptors generally are thought to be able to avoid obstacles; however, their collision risk increases when they are foraging for prey or engaged in territorial defense (APLIC 2012). Although Fresno County contains many high-voltage transmission lines, the Project would introduce additional collision hazards to the site.

Risk factors typically associated with avian collisions with man-made structures include size of facility, height of structures, and specific attributes of structures (guy wires and lighting/light attraction), as well as siting in high risk areas, frequency of inclement weather, type of development and species or taxa at potential risk. The role of these risk factors has been outlined in the USFWS draft guidelines for communication towers (USFWS, 2013), as well as by various publications in the peer reviewed literature (Gehring et al. 2009 and 2011; Kerlinger et al. 2010). Such collisions can result in injury or mortality, including, in the case of powerlines, from electrocution.

The impact of collision on raptors would be less than significant with adherence to the Avian Power Line Interaction Committee (APLIC) standards according to **APM BIO-3**, which would minimize impacts to raptors during construction, operation and decommissioning. **APM BIO-2** would space conductors widely enough to prevent electrocution hazards to birds. **AMM-7** would require insulated wires and follow bird and wildlife protective standards in areas with high risk of electrocution for PG&E facilities. Implementation of these measures would reduce potential direct and indirect impacts from wiring to raptors to a less-than-significant level.

Loggerhead shrike and other migratory birds

Depending on the timing of construction-related activities, the Project could result in the direct loss of active nests of special-status or migratory bird species, including loggerhead shrike; the abandonment of an active nest by adult birds; or the direct loss of individual nests, either of ground nesters, or birds nesting in trees, shrubs, or on power lines. The potential loss of an active bird nest would be a significant impact. Implementation of **APM BIO-4** and **BMP-1** would reduce potential impacts to nesting birds to a less-than-significant level. Smaller migratory birds or bats flying over the site may also be impacted by collision with power lines during construction, operation or decommissioning. These impacts would be minimized by **APM BIO-3**.

San Joaquin kit fox

While the disked and actively cultivated agricultural lands on-site are not preferred denning habitat and only provide limited foraging habitat, the Project site is surrounded by other agricultural lands, which could potentially support San Joaquin kit fox. Kit fox is not likely to be present on PG&E property, which is disturbed and fenced. San Joaquin kit fox may sporadically occur on Orchard Substation portions of the Project site. If this species is present at the site, then construction, operation, or decommissioning traffic could have the potential to cause a significant adverse impact to San Joaquin kit fox either directly (e.g., through mortality or injury from construction vehicles or ground disturbance) or indirectly (disturbance from night lighting, which may interfere with foraging, or increased site activity, which may draw predators).

APM BIO-1 and **AMM-4** would limit speed limits on the site to 15 mph, while **APMs BIO-6** would cover all open holes or trenches. **APM BIO-6** and **AMM-1** would provide for worker environmental awareness training. **APM BIO-7** provides for minimizing night lighting and the project design will use motion-triggered lights. **AMM-12** provides for excavation of unoccupied kit fox dens, if found in the PG&E Interconnection Facilities work area, and avoidance with suitable buffers for any occupied dens. This measure would reduce impacts on kit fox on PG&E property to a less-than-significant level. These measures would protect San Joaquin kit foxes that might cross the site during construction. However, kit fox may also be present on the Orchard Substation site prior to construction, and could potentially be injured or disturbed. With implementation of **Mitigation Measure BIO-1** below for the Orchard Substation site, in addition to the APMs, potentially significant direct and indirect impacts to the San Joaquin kit fox would be reduced to a less-than-significant level.

Mitigation Measure BIO-1: Protection of Kit Fox During Construction.

Preconstruction surveys shall be conducted by a qualified biologist for the presence of San Joaquin kit fox within 14 days prior to commencement of construction activities pursuant to the USFWS (1999) *Standardized Recommendations for Protection of the San Joaquin Kit Fox*. The surveys shall be conducted in areas of suitable habitat for San Joaquin kit fox. Areas that have been disked or cultivated within 12 months prior to the start of ground-disturbing activities are not considered suitable. Surveys need not be conducted for all areas of suitable habitat at one time; they may be phased so that surveys occur within 14 days prior to disturbance within active portions of the site. If no potential San Joaquin kit fox dens are identified, no further mitigation is required. If potential kit fox dens are observed and avoidance is determined to be feasible (as defined in CEQA Guidelines §15364 consistent with the USFWS [1999] *Standardized Recommendations for Protection of the San Joaquin Kit Fox*) by a qualified biologist in consultation with the Project owner and the County, buffer distances shall be established prior to construction activities.

If avoidance of the potential dens is not feasible, the following measures shall be implemented to avoid potential adverse effects to the San Joaquin kit fox:

- If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent foxes from using them during construction.
- If the qualified biologist determines that a potential non-natal kit fox den may be active, an on-site passive relocation program shall be implemented with prior approval from the USFWS. This program shall consist of excluding San Joaquin kit foxes from occupied burrows by installation of one-way doors at burrow entrances, monitoring of the burrow for 72 hours to confirm usage has been discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the qualified biologist determines that the San Joaquin kit foxes have stopped using active dens within the Project boundary, the dens shall be hand-excavated, as stated above for inactive dens.

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: *No Impact.*

No riparian habitats or other sensitive natural communities occur on the Project site; therefore, no impacts would occur.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means: *No Impact.*

No federal or state protected wetlands are located on the Project site; therefore, no impacts would occur.

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: *Less than Significant.*

The small permanent disturbance area at the Project site is located in a highly disturbed agricultural and industrial area that lacks habitat to support wildlife corridors or wildlife nursery sites; construction and operation would not interfere with local wildlife movement and the site is not located within a migratory corridor for terrestrial wildlife.

Several tall (up to 199 foot) towers or lightning shield mast structures would be installed during construction, as well as 135-foot structures associated with the STATCOM and switchyard. These structures would be located within close proximity to the existing PG&E Gates Substation, which already contains numerous tall structures and 500 kV transmission lines, as well as multiple smaller transmission lines. The proximity of the Project to the substation and its small size indicates that addition of structures associated with the Project is unlikely to have a substantial impact on migrating bird corridors within the region. Thus, impacts would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance: *No Impact.*

Because the CPUC has exclusive jurisdiction over Project siting, design, and construction, the Project is not subject to local land use and zoning regulations or discretionary permits. However, local regulations relating to biological resources were reviewed to ensure that the Project would not be in conflict with local policies or ordinances protecting biological resources. One of the Fresno County General Plan Open Space Element Goals (Fresno County, 2000) calls for a Biological Resource Evaluation to be prepared by a qualified biologist prior to approval of discretionary development permits to determine potential significant impacts on “significant resources and/or special-status plants or animals.” A biological resources technical report was prepared by a qualified biologist and reviewed by ESA biologists that satisfies the objectives set forth in the plan (Heritage Environmental, 2021). Implementation of the Project would not conflict with local

policies or ordinances relating to biological resources. Therefore, no impacts would occur under this criterion.

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: *Less than Significant.*

The Project is located within the San Joaquin Valley Operations and Maintenance Habitat Conservation Plan area, and all applicable AMMs and BMPs within this Plan have been adopted for the Project (see Section 3.4.3). Implementation of these measures would minimize impacts on biological resources, and thus avoid conflict with an adopted Habitat Conservation Plan. There are no adopted NCCPs in Fresno County or in the adjacent Kings County. Therefore, impacts under this criterion would be less than significant, with no mitigation required.

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3.5 Cultural Resources

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

Cultural resources include historic architectural resources, archaeological resources, and human remains. This section provides an assessment of potential impacts on cultural resources as a result of the Project. The cultural resources study area comprises the entire Project footprint including all Project components, access roads, and staging area.

Prehistoric Period

Most Late Pleistocene landscapes in the San Joaquin Valley have been destroyed or buried by Holocene-epoch erosion and deposition, while most surface sites, including village mounds, have been obliterated by erosion and agricultural development. Thus, very few archaeological sites exist throughout the Central Valley prior to 2,500 Before the Common Era (BCE) and the cultural-historical framework, especially in the southern San Joaquin Valley, is poorly defined (Rosenthal et al., 2010).

Paleo-Indian Period (11,550-8,550 BCE)

Investigation within remaining Pleistocene deposits in the southern San Joaquin Valley indicates occupation dates between 11,550 BCE-9,550 BCE, based on a large cache of Clovis-like concave base projectile points in the Tulare Lake basin (Rosenthal et al., 2010).

Lower Archaic Period (8,550-5,550 BCE)

Archaeological sites in the San Joaquin Valley are extremely limited in this period due to significant alluvial depositions circa 9050 BCE and 5550 BCE; however, stone tool assemblages from the Tulare Lake basin resemble those from the Great Basin area (Rosenthal et al., 2010).

Middle Archaic Period (5,550-550 BCE)

A warmer and drier climate during this period led to lake desiccation in the San Joaquin Valley while rising sea levels created the Sacramento-San Joaquin delta to the north. Distinct foothill and valley settlement-subsistence patterns are evidenced, as are stable, year-round residence along

rivers and well-established trade networks. The Windmill Pattern of oriented and extended burials likely developed in this period, possibly in the San Joaquin Valley (Rosenthal et al., 2010). Intensification of subsistence practices is indicated by new fishing technologies, increased groundstone use, and expansion of manufacturing industries.

Upper Archaic Period (550 BCE-AD 1100)

A cooler, wetter, and more stable environment during this period led to the return of lakes in the San Joaquin Valley. Village mounds appear in the Delta region after 700 BCE, while Windmill descendants are evident in the San Joaquin Valley through the end of the period. A sharp population increase throughout the Central Valley after 500 BCE was accompanied by more reliance on fishing, acorn processing, and soft technology. Southern San Joaquin Valley sites are rare, although they indicate year-round villages and aquatic and terrestrial resource exploitation (Rosenthal et al., 2010).

Emergent Period (AD 1100-Historic)

Evidence exists for continued increase of population and social complexity across the Central Valley during this period, including a transition to cremation, decentralization of production, and development of a monetized system of exchange. Villages expanded along foothill streams, valleys, rivers, and sloughs. While there is little direct evidence of plant use in the San Joaquin Valley, mortars and pestles were common elsewhere in the Central Valley after 1000 AD, and fish- and plant-based subsistence strategies dominated. This period saw the introduction of bows and arrows and pottery to the region, especially in the eastern foothills. At the time of European contact, 15 tribal groups, collectively referred to as Yokuts, occupied the southern San Joaquin Valley (Wallace, 1978).

Ethnographic Period

The southern San Joaquin Valley and lower foothills were inhabited by Yokuts tribes that were linguistically related to the California Penutian language family of central and coastal California (Silverstein, 1978). The Southern Valley Yokuts' homeland stretched from present-day Fresno to south of Bakersfield and encompassed Tulare, Buena Vista, and Kern Lakes and the surrounding sloughs and marshes. Southern Valley Yokuts' lifeways were closely linked to the lake/slough/marsh environmental setting.

Subsistence was centered on fish, primarily lake trout and anadromous fish. Nets strung between tule rafts and shore poles were employed, as well as hand nets, basket traps, and spears. Fish were generally broiled on hot coals or sun dried. Reliance on game was low, although roasted turtles were favored, and snares and nets were used to catch waterfowl. Plant foods included ground tule roots and seeds, as well as grassnut roots and clover. Acorns were acquired by trading fish with tribes farther east. Single-family huts, granaries, and sweathouses were constructed of tule mats over wood frames. Tule was also used for baskets and other crafts, including watercraft (Silverstein, 1978).

Social organization was based on the biological family, patrilineal totemic lineages, and exogamous totemic lineage, and was divided into moieties for rituals and games. Significant life-

cycle rituals included birth, puberty, marriage, and death; group rituals included an annual six-day festival honoring the dead, first-fruit rites, and a springtime Datura rite. No political unity existed between tribes; instead, they were organized into self-governing miniature tribes of about 350 people, each with a different dialect. Tribal land, covering on average about 250 square miles, was owned collectively; any member could use its resources. Population of the Southern Valley Yokuts at European contact is estimated at 15,000. Most tribes were spread across several settlements, with one dominant larger village (Wallace, 1978).

The plains and foothills of the west side of the San Joaquin Valley were occupied by several Southern Valley Yokuts tribes, the largest of which was the Tache. The Tache wintered at the village of Poza Chaná, 5 miles southwest of present-day Huron (3.5 miles northwest of the Project). Poza Chaná functioned as a trading village, where tribes from the coast would come inland to trade shell beads and other ocean resources for obsidian, soapstone beads, and seeds (Breschini and Haversat, 1987). According to confidential tribal knowledge provided by the Dumna Wo-Wah Tribal Government, the study area and vicinity was historically used for habitation, resource collection, and ceremonial purposes (Ledger, 2020).

Historic Period

Spanish Period (1772–1822)

The earliest recorded European entry into the southern San Joaquin Valley was the Pedro Fages expedition of 1772. The Francisco Garcés expedition of 1776 terminated approximately 20 miles north of present-day Bakersfield. The 1806 Gabriel Moraga-Fr. Pedro Muñoz expedition reached the Tule River and the Koyeti village of Chokowesho, near present-day Porterville. Records of contact with and impact on Native Americans are minimal from this period; no ranchos were established in the San Joaquin Valley. However, almost all the Yokuts along the plains and foothills of the west side of the San Joaquin Valley had been taken to the Spanish missions on the Pacific coast (Breschini and Haversat, 1987). The region was used a rendezvous point for neophytes fleeing the Mission system, which resulted in the transmission of some foreign native and European culture and physiological threats to the area.

Mexican Period (1822–1848)

Most European activity in the region during the Mexican period consisted of punitive expeditions to recover or acquire livestock, thieves, or slaves. Expeditions by fur trappers, traders, and explorers during this period included those led by Jedidiah Smith (1827), Kit Carson (1830) and John Fremont (1844). European influence during this period increased, as evidenced by the 1833 malaria epidemic which exterminated most remaining Yokuts west of the San Joaquin River (Breschini and Haversat, 1987).

American Period (1848–Present)

The San Joaquin Valley was on the primary wagon route from the eastern United States to the California gold fields farther north in the Sierra Nevada foothills. Settlement in the region during the early American period primarily consisted of removal by force of Native Americans and the

construction of trading posts and ferries at river crossings along the Los Angeles-Stockton road, most of which were established by 1850. Remaining Native Americans were removed to reservations, including the Sebastian (Tejon) Indian Reservation (1853-1864) and the Fresno River Farm (1854-1860).

Many towns through the San Joaquin Valley were established by the Southern Pacific Railroad (SPRR) in the 1870s and 1880s as the southern trans-continental railroad was constructed down the valley from San Francisco to Tehachapi Pass. For larger towns, such as Merced, Modesto, and Fresno, the SPRR constructed the rail infrastructure, and their holding company built civic improvements and sold lots. Small towns, including Coalinga and Huron closer to the study area, began as coaling or watering stations along the SPRR line (Orsi, 2005). By the early 20th century, some of these towns developed economies distinct from the railroad, including oil extraction at Coalinga and wool production at Huron.

Agriculture in the San Joaquin Valley began early in the American period, encouraged by an 1857 drainage and reclamation law. By 1900, much of the surface-water flow in the Valley had been diverted for agricultural use. SPRR land grant and settlement policies favored the development of small family farms (Orsi, 2005). Large tracts of land were also used for cattle ranching, especially by the Miller and Lux Company, an early corporate farming entity. The Central Valley Project, beginning in the 1930s, constructed an immense system of dams, canals, and aqueducts throughout the San Joaquin Valley. It pushed out many small farmers, which were replaced by large-scale corporate farms employing massive numbers of agricultural laborers, including many immigrants and refugees from the Dust Bowl. Large-scale commercial agriculture remained the main industry in the San Joaquin Valley through the 20th century, producing most of the agricultural production in California.

Known Resources

Records Search and Historical Research

Information on the character and location of cultural resources at the study area and local vicinity was compiled from background and archival research at the California Historical Resources Information System (CHRIS) through the Southern San Joaquin Valley Information Center (SSJVIC). The Native American Heritage Commission (NAHC) and interested Native American individuals also were contacted. The research and Native American outreach were supplemented by an intensive survey of the study area. The information was then used to evaluate the Project against the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist (as amended in December 2019) significance criteria to determine potential impacts.

The SSJVIC record search indicated that no portion of the study area has been subjected to an intensive pedestrian survey within the past five years. Earlier surveys of the study area were conducted in 1977 (Davis et al., 1977, ~10% coverage) and 2001 (Aspen, 2001, ~10% coverage). An additional nine reports were identified outside of the study area, but within the 1-mile search buffer.

Background research indicates that the PG&E Interconnection Facilities area has been previously surveyed for cultural resources (Davis, 1977; Aspen, 2001; Kaijankoski, 2010; Applied Earthworks, 2016) and no cultural resources have been identified.

The record search identified one resource within the study area, a historic-era built environment resource detailed below (P-10-006610). One additional resource is located outside of the study area but within the 1-mile records search buffer. This resource (P-10-006640), a historic-era electrical transmission line, is approximately 650 feet southeast of the study area.

P-10-006610 was originally recorded in 2015 by Applied EarthWorks as part of the Central Valley Power Connect Project. This resource is the PG&E Gates-Panoche transmission line, constructed in the late 1940s. The resource consists of two sets of 230kV three-phase conductors supported by 100-foot-high double circuit steel lattice towers and runs from the PG&E Gates Substation 43.2 miles northwest to the Panoche Substation. The resource was evaluated in 2015 and was determined not eligible for listing in the NRHP or California Register of Historical Resources (CRHR) (Asselin et al., 2015).

The review of historic maps agrees with the development history of the west side of Fresno County. On the 1855 survey map, nothing is shown in the study area. The nearest feature is a wagon road segment approximately 3.5 miles to the northeast. The 1912 map shows no roads or structures in the study area. Maps from the 1930s show paved Jayne Avenue south of the study area, as well as dirt roads running diagonally across the parcel surrounding the study area, though no structures. The 1942 map shows four buildings approximately 0.5 mile to the east of the study area. The 1950s maps show these same buildings, now labelled Sommerville Farms, with adjacent grain tanks and nearby wells and oil tanks; the PG&E Gates Substation to the south of the study area; and transmission lines crossing the study area, including the Gates-Panoche line (recorded as P-10-006610) and a line running north along Trinity Avenue. The 1970s maps show an expanded PG&E Gates Substation and additional transmission lines. At no point are any buildings shown within the study area.

Buried Site Sensitivity

Geoarchaeological assessments for nearby projects were consulted (Kaijankoski, 2010). These included surface soil assessments and rated the archaeological sensitivity, or potential to support the presence of buried prehistoric archaeological deposits, of the area based on geologic unit and environmental parameters such as distance to water and landform slope.

The archaeological sensitivity assessment was conducted in 2010 and found that the study area is located on the middle part of the Coalinga fan, one of the largest alluvial fans emitting from the western foothills in this portion of the San Joaquin Valley (Kaijankoski, 2010). Los Gatos Creek, a seasonal creek, is the principal drainage for the fan and is located 3.2 miles northwest of the study area. While surface soils in the study area are young enough to overlie older prehistoric archaeological sites, the report concluded that without a nearby source of fresh water, it is unlikely the study area attracted any prolonged human use or settlement, and that buried archaeological sensitivity is, therefore, moderate.

Archaeological Survey

The survey area included the study area (20 acres), the remainder of the surrounding parcel (72 acres), plus a buffer for a total of approximately 98 acres. The survey entailed 5-10 meter transects depending on ground visibility and accessibility. Previously unrecorded resources encountered would be recorded on digital DPR 523 site forms, and their locations recorded using a handheld device running Environmental System Research Institute (ESRI) Arc Collector software.

No archaeological resources were located during the surface survey. One existing historical built-environment resource (P-10-006610) crosses the southwest portion of the parcel but is outside the Project footprint. This resource, the PG&E Gates-Panoche transmission line, was evaluated in 2015 and determined ineligible for listing on the NRHP and CRHR (Asselin, et al., 2015).

3.5.2 Regulatory Setting

Federal

Although there is no federal nexus associated with the Project, the following information regarding federal laws addressing cultural resources is presented to provide context and continuity with State laws.

National Historic Preservation Act

The principal federal law addressing historic properties is the National Historic Preservation Act (NHPA), as amended (54 United States Code of Laws [USC] 300101 et seq.), and its implementing regulations (36 CFR Part 800). Section 106 requires a federal agency with jurisdiction over a proposed federal action (referred to as an “undertaking” under the NHPA) to take into account the effects of the undertaking on historic properties, and to provide the Advisory Council on Historic Preservation (ACHP) and other interested parties an opportunity to comment on the undertaking.

The term “historic properties” refers to “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register” (36 CFR Part 800.16(l)(1)). The implementing regulations (36 CFR Part 800) describe the process for identifying and evaluating historic properties, for assessing the potential adverse effects of federal undertakings on historic properties, and seeking to develop measures to avoid, minimize, or mitigate adverse effects. The Section 106 process does not require the preservation of historic properties; instead, it is a procedural requirement mandating that federal agencies take into account effects to historic properties from an undertaking prior to approval.

The steps of the Section 106 process are accomplished through consultation with the State Historic Preservation Officer (SHPO), federally-recognized Indian tribes, local governments, and other interested parties. The goal of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The agency also must provide an opportunity for public involvement (36 CFR 800.1(a)). Consultation with Indian tribes regarding issues related to Section 106 and other authorities (such as NEPA and Executive Order No. 13007) must recognize

the government-to-government relationship between the Federal government and Indian tribes, as set forth in Executive Order 13175, 65 FR 87249 (Nov. 9, 2000), and Presidential Memorandum of Nov. 5, 2009.

National Register of Historic Places

The NRHP was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2) (U.S. Department of the Interior, 2002). The NRHP recognizes a broad range of cultural resources that are significant at the national, state, and local levels and can include districts, buildings, structures, objects, prehistoric archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. As noted above, a resource that is listed in or eligible for listing in the NRHP is considered “historic property” under Section 106 of the NHPA.

To be eligible for listing in the NRHP, a property must be significant in American history, architecture, archaeology, engineering, or culture. Properties of potential significance must meet one or more of the following four established criteria:

1. Are associated with events that have made a significant contribution to the broad patterns of our history;
2. Are associated with the lives of persons significant in our past;
3. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior, 2002). The NRHP recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Ordinarily religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not considered eligible for the NRHP unless they meet one of the “Criteria Considerations” (A-G), in addition to meeting at least one of the four significance criteria and possessing integrity (U.S. Department of the Interior, 2002).

State

California Register of Historical Resources

The State implements the National Historic Preservation Act (NHPA) of 1966, as amended, through its statewide comprehensive cultural resources surveys and preservation programs. The Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

The California Register of Historical Resources (CRHR) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (Public Resources Code Section 5024.1[a]). The criteria for eligibility for the CRHR are based upon National Register criteria (Public Resources Code Section 5024.1[b]). Certain resources are determined by statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the CRHR, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

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;
or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the CRHR.

Additionally, the CRHR consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register;

- California Registered Historical Landmarks from No. 770 onward;¹ and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the CRHR.

Other resources that may be nominated to the CRHR include:

- Historical resources with a NRHP Status Code of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the CRHR, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at Public Resources Code Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources.

Under CEQA (Section 21084.1), a project 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. An archaeological resource may qualify as an “historical resource” under CEQA. The CEQA Guidelines (Title 14 California Code of Regulations Section 15064.5) recognize that historical resources include: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g); and (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 by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the 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.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the CEQA Guidelines apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or

¹ The current standards for designating a California Historic Landmarks are applied to landmarks #770 and onward. Landmarks designated prior to #770 do not meet the current designation criteria and, therefore, do not qualify as historical resources.

alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (CEQA Guidelines Sections 15064.5(b)(1) and 15064.5(b)(4)).

If an archaeological site does not meet the criteria for a historical resource presented in the CEQA Guidelines, then the site may be treated in accordance with the provisions of Public Resources Code Section 21083, which establishes requirements for unique archaeological resources. As defined in Public Resources Code Section 21083.2 a “unique” archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, and the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures are required.

The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5(c)(4)).

Assembly Bill 52

A summary of the AB 52 statutes is provided in Section 3.2.18, *Tribal Cultural Resources*.

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the Coroner determines, or has reason to believe, the remains to be those of a Native American, the Coroner shall contact the NAHC by telephone within 24 hours.

California Public Resources Code Section 5097.98

California Public Resources Code Section 5097.98 provides procedures in the event human remains of Native American origin are discovered during Project implementation. It requires that

no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. It further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters” (CPUC, 1995).

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but county regulations are not applicable as Fresno County does not have jurisdiction over the Project. Because the CPUC has exclusive jurisdiction over the Project siting, design, and construction, the Project is not subject to local land use and zoning regulations or discretionary permits. This section identifies local land use plans and regulations for informational purposes and to assist with California Environmental Quality Act (CEQA) review. Although LS Power Grid California, LLC (LSPGC) is not subject to local discretionary permitting, ministerial permits would be secured as required.

Fresno County Code of Ordinances

Pursuant to Fresno County Code of Ordinances Section 816.2-D.i, Public Utility Facilities are permitted uses within Exclusive Agriculture (AE) Districts, subject to approval of a conditional use permit by the Fresno County Director of Public Works and Planning. However, the CPUC has preemptive power under the California Constitution (Article XII, Section 8) over local jurisdictions with respect to regulation of investor-owned public utilities and electric utility siting. The CPUC, therefore has ultimate decision-making authority over land use decisions for the Project.

Fresno County General Plan

The following relevant Cultural Resources goals and policies from the Fresno County General Plan were reviewed, and the following summaries are provided for informational purposes.

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

Policy OS-J.1: The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archeological, paleontological, and cultural sites and their contributing environment from damage, destruction, and abuse to the maximum extent feasible. Project-level mitigation shall include accurate site surveys, consideration of project alternatives to preserve archeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable.

Policy OS-J.2: The County shall, within the limits of its authority and responsibility, maintain confidentiality regarding the locations of archeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

3.5.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

LSPGC has proposed the following applicant proposed measures (APMs) to address impacts to cultural resources attributable to Project construction, operations, and/or maintenance.

- **APM CUL-1 (Development and Implementation of a Worker Environmental Awareness Program):** LSPGC would design and implement a Worker Environmental Awareness Program (WEAP) that would be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. The WEAP would be submitted and approved by the CPUC prior to construction. No construction worker would be involved in ground disturbing activities without having participated in the WEAP. The WEAP would include, at a minimum:
 - Training on how to identify potential cultural resources and human remains during the construction process;
 - A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation;
 - A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project;
 - A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and LSPGC policies; and
 - A statement by the construction company or applicable employer agreeing to abide by the WEAP, LSPGC policies and other applicable laws and regulations.

The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist.

- **APM CUL-2 (Cultural Resources Inventory):** If proposed facilities and ground-disturbing activities move outside the previously surveyed footprint, those areas would be subjected to a cultural resources inventory to ensure that any newly identified cultural resources are avoided by ground disturbing activities.
- **APM CUL-3 (Archaeological and Native American Monitoring):** If subsurface prehistoric or ethnohistoric resources are encountered during construction, archaeological and Native American monitoring is recommended during all excavation associated with the Project. A qualified archaeologist and a member of the Dumna Wo-Wah Tribal Government shall be retained by LSPGC to monitor excavation associated with the Proposed Project to ensure that there is no impact to any significant unanticipated cultural resource. Prior to construction, LSPGC would consult with a designated representative of the Dumna Wo-Wah Tribal Government on the appropriate course of action to be taken should unanticipated cultural materials, and specifically human remains, be discovered during construction.
- **APM CUL-4 (Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources):** In the event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 100 feet (30 meters) of the discovery would be halted and redirected to another location. LSPGC's qualified archaeologist would inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts would occur, the resource would be documented on State of California Department of Parks and Recreation cultural resource records and no further effort would be required. If the resource cannot be avoided and may be subject to further impact, LSPGC would evaluate the significance and CRHR eligibility of the resources and, in consultation with the CPUC, determine appropriate treatment measures. Preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, LSPGC's qualified archaeologist, in consultation with the CPUC and, if the unearthened resource is prehistoric or Native American in nature, the Native American monitor, shall develop additional treatment measures, such as data recovery consistent with CEQA Guidelines Sections 15126.4(b)(3)(C)-(D). Archaeological materials recovered during any investigation shall be curated at an accredited curation facility.
- **APM CUL-5 (Unanticipated Discovery of Human Remains):** Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy where feasible and otherwise managed pursuant to the standards of CEQA Guidelines Sections 15064.5(d) and (e). If human remains are discovered during construction or O&M activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner would contact the NAHC. The NAHC would then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects. No part of the Project is located on federal land.

PG&E Construction Measures

PG&E would implement the following best management practices (BMPs) to address impacts to cultural resources attributable to construction of the PG&E Interconnection Facilities. No avoidance and minimization measures (AMMs) are applicable to cultural resources.

- **BMP-17 (Cultural Resources Inadvertent Discovery Protocol):** If cultural resources are observed during ground-disturbing activities, the following procedures will be followed:
 - Stop all ground disturbing work within 100 feet of the discovery location to avoid impacts.
 - Immediately notify a PG&E Cultural Resource Specialist (CRS) who will assess the discovery.
 - Leave the site or the artifact untouched.
 - Record the location of the resource, the circumstances that led to discovery, and the condition of the resource.
 - Do not publicly reveal the location of the resource and ensure the location is secured.
 - If unsure about the significance or antiquity of a discovery, photograph the artifact or feature with a scale (e.g., coin, tape measure, etc.) and send to a PG&E CRS for review.

Comprehensive guidance on the protocol related to an inadvertent discovery of potentially significant cultural resources on a job site can be found in Utility Standard ENV-8005S or by consulting a PG&E Cultural Resource Specialist.

- **BMP-18 (Human Remains Protocol):** Section 7050.5 of the California Health and Safety Code (CHSC) states that it is a misdemeanor to knowingly disturb a human burial. In keeping with the provisions provided in 7050.5 CHSC and Public Resource Code 5097.98, if human remains are encountered (or are suspected) during any project-related activity:
 - Stop all work within 100 feet;
 - Immediately contact a PG&E CRS, who will notify the county coroner;
 - Secure location, but do not touch or remove remains and associated artifacts;
 - Do not remove associated spoils or pick through them;
 - Record the location and keep notes of all calls and events; and
 - Treat the find as confidential and do not publicly disclose the location.

Contact:

- Upon discovery of cultural resources or suspected human remains, contact the following individual immediately:

CRS Name: [Contact to be identified prior to construction]

- **BMP-20: (Worker Awareness Training):** Prior to the start of any ground-disturbing activity, PG&E's CRS shall prepare archeological, historical and paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The CRS shall make the training materials available for review and comment by the Native American group that expressed interest in the project. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the CRS. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of resources that could be encountered within the Project site and the procedures

to be followed if they are found. PG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, which documentation shall be made available upon request.

3.5.4 Environmental Impacts

Methodology and Assumptions

Potential historical resources, including archaeological resources and architectural resources, were identified using the background research, survey effort, and archaeological sensitivity analysis described previously under the Known Resources subheading under Section 3.5.1. The following analysis of direct and indirect effects is based on the criteria identified in the CEQA Guidelines, Appendix G.

Direct and Indirect Effects

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5: *No Impact.*

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. The following discussion focuses on historic architectural and structural resources of the built environment. Archaeological resources, including those that are potentially historical resources according to CEQA Guidelines Section 15064.5, are addressed below under issue b).

One historic architectural resource, the Gates-Panoche transmission line (P-10-006610) was previously recorded within the study area and was evaluated as ineligible for listing on the NRHP and CRHR. No historic architectural resources have been recorded in the PG&E Interconnection Facilities area.

Therefore, as there are no historic architectural resources in the study area or PG&E Interconnection Facilities area, no impacts to historic architectural resources qualifying as historical resources under CEQA would occur under this criterion.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5: *Less than Significant.*

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on archaeological resources. Archaeological resource can be considered significant as either historical resources or unique archaeological resources.

There are no known archaeological resources within the study area or the PG&E Interconnection Facilities area, so there would be no impact to known archeological resources. However, there may be unrecorded subsurface prehistoric archaeological material, as indicated by the moderate result of the archaeological sensitivity study (Kaijankoski, 2010). Tribal consultation with the Dumna Wo-Wah Tribal Government Chairman also indicates the potential uncover previously

undiscovered resources in the study area during Project ground disturbing activities (Ledger, 2020).

The Project would entail excavation that may encounter archaeological materials qualifying as either historical resources or unique archaeological resources. To reduce impacts on archaeological resources, LSPGC proposed APMs CUL-1, CUL-3, and CUL-4 requiring cultural resources awareness training, monitoring if a resource is identified, consideration of avoidance, recovery, and documentation of any identified resources. In addition, PG&E has proposed BMPs 17, 18, and 20 that provide cultural resources awareness training and protocol in the event of an inadvertent discovery of cultural resources or human remains during Project implementation in the PG&E Interconnection Facilities area. The CPUC has determined that these APMs and BMPs would reduce substantial adverse changes in the significance of an archaeological resource, if identified during Project construction, pursuant to CEQA Guidelines Section 15064.5 to below the level of significance.

c) Disturb any human remains, including those interred outside of dedicated cemeteries: *Less than Significant.*

There are no known human remains in the study area or the PG&E Interconnection Facilities area. The likelihood of encountering unanticipated subsurface human remains during the Project construction is low based on the background research and survey results. However, based on confidential tribal knowledge provided during background research, unrecorded human remains may be present within the study area and the PG&E Interconnection Facilities area (Ledger, 2020). To reduce impacts on archaeological resources, LSPGC has proposed APM CUL-5, which includes actions to follow in the event of a discovery of human remains. In addition, PG&E has proposed BMPs 18 and 20, which provides similar actions to follow in the event of a discovery of human remains. Implementation of APM CUL-5 and BMPs 18 and 20 would ensure that impacts to human remains are reduced to less than significant.

3.5.5 References

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3.6 Energy

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
VI. ENERGY — 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 Environmental Setting

California Energy System

California's energy system includes electricity, natural gas, and petroleum. According to the California Energy Commission (CEC), California's energy system generated 72 percent of the electricity, 48 percent of the natural gas, and less than 1 percent of the petroleum consumed or used in the state. The rest of the state's energy is imported and includes electricity from the Pacific Northwest and the Southwest; natural gas purchases from Canada, Rocky Mountain states, and the southwest; and petroleum imported from Alaska and foreign sources (CEC, 2021a, 2021b, 2021c).

Electricity

The production of electricity requires the consumption or conversion of energy resources including natural gas, coal, water, nuclear, and renewable sources such as wind, solar, and geothermal. Of the electricity generated in California, approximately 48 percent is generated by natural gas-fired power plants, 9 percent comes from large hydroelectric dams, 8 percent comes from nuclear power plants, and less than 1 percent is generated by coal-fired power plants. The remaining approximately 33 percent of in-state total electricity production is supplied by renewable sources including solar, biomass, geothermal, small hydro, and wind power (CEC, 2021a).

Electricity is generated and then distributed via a network of high voltage transmission lines commonly referred to as the power grid. Electricity-transmitting facilities, such as the Pacific Gas and Electric Company (PG&E) Gates Substation, are an important part of the 500 kV transmission system within the Central Valley. The greater Fresno area interconnects to the bulk of the PG&E transmission system by 13 transmission circuits, including six 500 kV lines that are served from the PG&E Gates Substation in the south, Moss Landing in the west, Los Banos in the northwest, Bellota in the northeast, and Templeton in the southwest. As discussed in Project Description Section 2.3.1, studies prepared by the California Independent System Operator Corporation (CAISO) have forecasted high voltages on Central Valley substation buses, including at Gates Substation, starting when Diablo Canyon Nuclear Generation Station (Diablo Canyon) retires, currently scheduled for 2024 for Unit 1 and 2025 for Unit 2. The most critical system issues appear to be 2028 spring off-peak or 2028 winter off-peak, even when all transmission

facilities are in service. If voltage fluctuations are not addressed, PG&E customers could experience periodic blackouts or scheduled outages once Diablo Canyon is retired.

Fuels

Gasoline is by far the largest transportation fuel by volume used in California. Nearly all the gasoline used in California is obtained through the retail market. In 2019, approximately 15.4 billion gallons of gasoline were sold in California’s retail market (CDTFA, 2021a). Diesel fuel is the second largest transportation fuel by volume used in California behind gasoline. It is estimated that approximately 53 percent of total diesel sales in California are associated with retail sales. In 2019, 3.1 billion gallons of diesel were sold in California (CDTFA, 2021b). According to the U.S. Department of Energy’s Energy Information Administration, nearly all semi-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction, and military vehicles and equipment have diesel engines.

Local and Regional Energy Use

PG&E is an investor-owned utility company that provides electricity supplies and services throughout a 70,000-square-mile service area that extends from Eureka in the north, to Bakersfield in the south, and from the Pacific Ocean in the west, to the Sierra Nevada in the east. Fresno County is within PG&E’s service area for electricity. Operating characteristics of PG&E’s electricity consumption by sector in the PG&E service area based on the latest available data from the CEC are provided below in **Table 3.6-1**.

**TABLE 3.6-1
 ELECTRICITY CONSUMPTION IN PG&E SERVICE AREA (2019)**

Agricultural and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
All Usage Expressed in Millions of kWh (GWh)							
4,490	29,560	4,349	9,710	1,642	28,014	308	78,072

NOTES: kWh = kilowatt-hours; GWh = gigawatt-hours.

SOURCE: CEC, 2021e

In Fresno County, approximately 7,400 million kilowatt-hours (kWh) of electricity were consumed in 2019, with approximately 4,600 million kWh consumed by non-residential uses (CEC 2021e).

Regular unleaded gasoline is used primarily to fuel passenger cars and small trucks. Diesel fuel is used primarily in large trucks and construction equipment. Both are used widely within Fresno County and across all parts of the PG&E service territory. The CEC estimates that 376 million gallons of gasoline and approximately 100 million gallons of diesel were sold in 2019 in Fresno County (CEC, 2021f). Gasoline and diesel usage in 2020 were affected by the economic shutdowns in response to the Pandemic. The CEC estimates that 347 million gallons of gasoline and approximately 135 million gallons of diesel were sold in 2020 in Fresno County (CEC, 2021f). This represents an 8 percent drop and 135 percent increase in gasoline and diesel use, respectively, compared to the previous year.

Project Site Existing Energy Use

The Project site currently has limited use for energy. It is currently used for agricultural purposes, and the only energy usage is associated with fuels to power agricultural equipment and farm worker automobiles and trucks and indirect electricity usage associated with irrigation of the existing vineyards.

3.6.2 Regulatory Setting

Federal

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

State

California Integrated Energy Policy

In 2002, the Legislature passed Senate Bill 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

The CEC has adopted the 2019 Integrated Energy Policy Report, which assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources, protect the environment, ensure reliable, secure, and diverse energy supplies, enhance the state's economy, and protect public health and safety. The 2019 Integrated Energy Policy Report covers a broad range of topics, including energy efficiency, building energy efficiency standards, achieving 60 percent renewables by 2030, and the California Energy Demand Forecast (CEC, 2021d).

Renewables Portfolio Standard

The State of California adopted standards to increase the percentage that retail sellers of electricity, including investor-owned utilities and community choice aggregators, must provide from renewable resources. The standards are referred to as the Renewable Portfolio Standards (RPS). The California Public Utilities Commission (CPUC) and the CEC jointly implement the

RPS program. As of 2018, utility providers are required to have 60 percent of their energy portfolio supplied by renewable energy sources by 2030.

Title 24 Building Energy Efficiency Standards

Title 24, Part 6, of the California Code of Regulations is the California Building Code governing all aspects of building construction. Included in Part 6 of the Building Code are standards mandating energy efficiency measures in new construction. Since its establishment in 1977, the building efficiency standards (along with standards for energy efficiency in appliances) have contributed to a reduction in electricity and natural gas usage and costs in California. The standards are updated every 3 years to incorporate new energy efficiency technologies. The latest update to the Title 24 standards became effective January 1, 2020. The standards regulate energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local planning and permits processes (CEC, 2021g).

Construction Equipment Idling

The California Air Resources Board has also adopted a regulation for in-use off-road diesel vehicles that is designed to reduce emissions from diesel-powered construction vehicles by imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than 5 minutes.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project, so therefore the Project is not subject to local discretionary regulations. The CPUC General Order 131-D (GO 131-D), Section XIV.B states that “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters” (CPUC, 1995). Public utilities are directed to consider local regulations and consult with local agencies, but county regulations are not applicable as Fresno County does not have jurisdiction over the Project. Because the CPUC has exclusive jurisdiction, the Project is not subject to local land use and zoning regulations or discretionary permits. Details below that relate to local regulations are provided for informational purposes and to assist with California Environmental Quality Act review. LS Power Grid California, LLC (LSPGC) and PG&E are not subject to local discretionary permitting although ministerial permits would be secured as required.

Fresno County General Plan

The Fresno County General Plan does not contain energy conservation-related goals, mandates, programs, or policies relating to utility infrastructure projects.

3.6.3 Applicant Proposed Measures and PG&E Construction Measures

There are no applicant proposed measures or PG&E construction measures (avoidance and minimization measures or best management practices) addressing energy.

3.6.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on energy resources. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities.

- a) **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation: *Less than Significant.***

Direct and Indirect Effects

Construction and Decommissioning

Construction and the future decommissioning of the Project would result in fuel consumption from the use of construction tools and equipment, vendor truck trips, and vehicle trips generated from workers traveling to and from the site. Project construction activities would not involve the consumption of natural gas, nor would it involve consumption of jet fuel or aviation gas for helicopters. The Applicant estimates that the construction phase of the Orchard Substation Facilities portion of the Project would take a total of 22 months to complete. The volume of diesel and gasoline fuels that would be consumed during construction of the Orchard Substation Facilities portion of the Project were calculated using the estimated GHG emissions and shown to consume a total of approximately 10,899 gallons of gasoline and 104,853 gallons of diesel fuel (LSPGC, 2021a, 2021b).

The volume of fuels and amount of electricity consumption that would be associated with the PG&E Interconnection Facilities portion of the Project have not been quantified; however, given its reduced area of disturbance and reduced scope of construction activities compared to the Orchard Substation Facilities portion of the Project, it is assumed that similar construction equipment and vehicle trips and associated fuel use for the PG&E Interconnection Facilities would be less than what was estimated for the Orchard Substation Facilities portion of the Project. For example, only 7 acres of ground disturbance would occur during construction of the PG&E Interconnection Facilities compared to 12 acres of ground disturbance during construction of the Orchard Substation Facilities. Construction of the PG&E Interconnection Facilities would include trenching conductor/cable and telecommunication lines and installation of the above-ground interconnection facilities, while construction of the Orchard Substation Facilities includes development of Orchard Substation, access roads, trenching for the below-ground conductor/cable and telecommunication lines, and construction of the stormwater detention basin. For the purposes of a conservative analysis of fuel use, it is assumed that the fuel volumes that

would be associated with the PG&E Interconnection Facilities portion of the Project would be the same as or less than the fuel volumes estimated for the Orchard Substation Facilities portion of the Project. Therefore, the volume of diesel and gasoline fuels that would be consumed during construction of the Project as a whole, including the PG&E Interconnection Facilities, would total approximately 21,798 gallons of gasoline and 208,706 gallons of diesel fuel. Project fuel use during construction would represent approximately 0.006 percent of gasoline and less than 0.16 percent of diesel sold in Fresno County in 2020 (CEC 2021f). Overall, the fuel use during construction would be minimal in comparison to the overall fuel use within the County.

Construction and operation activities would utilize electrical energy from the existing distribution system at the existing PG&E Gates Substation to power construction trailers, lighting, HVAC, and other equipment. Temporary construction power would be provided from an existing distribution line near the Project site. The short-term electricity usage that would be associated with construction of the Project would be minimal.

Project-specific construction-related energy demands would not be expected to have a significant adverse effect on energy resources. The amount, form, and use of energy required for construction and decommissioning activities would not be wasteful, inefficient, or unnecessary. Therefore, energy consumption by Project construction activities would result in less-than-significant impacts pertaining to wasteful, inefficient, or unnecessary consumption of energy.

Operation and Maintenance

Operation and maintenance (O&M) would require long-term use of gasoline for worker motor vehicle trips. O&M of the Orchard Substation Facilities portion of the Project would utilize approximately 477 gallons of gasoline per year (LSPGC, 2021a, 2021b). Similar to the construction fuel use assumptions described above, it is assumed that O&M of the PG&E Interconnection Facilities portion of the Project would require approximately the same amount of fuel and electricity usage as the Orchard Substation Facilities portion of the Project. Therefore, the volume of gasoline that would be consumed during O&M of the Project as a whole, including the PG&E Interconnection Facilities, would total approximately 944 gallons. The Project's O&M minimal usage would represent approximately 0.0002 percent of the total volume of gasoline consumed in Fresno County on an annual basis (CEC, 2021e). Again, the amount used in this phase of the Project is minimal when compared to the usage across the County. Regarding long-term electricity use for O&M activities, the total Orchard Substation Facilities demand on-site would be 12 kW or roughly 105,120 kWh per year (LSPGC, 2021c). Therefore, the amount of electricity that would be consumed during O&M of the Project as a whole, including the PG&E Interconnection Facilities, would total approximately 210,240 gallons of gasoline. This amount, in comparison to the over 7,400 million kWh used in the county in 2019, would represent a nominal amount (approximately 0.002 percent) of the total energy used in the county.

The Project would provide support to the existing power grid by providing voltage support and grid stability, thus reducing dynamic stability issues. This is important when considering the onset retirement of the Diablo Canyon Nuclear Generation Station and potential associated voltage fluctuations as described in the Project Description. The Project would not create barriers or waste energy for any existing transmission line, but instead would allow for more efficient

transmission and use of energy already being generated within the PG&E system, including renewable sources in the Central Valley. By upgrading the existing system to be more reliable, the Project would improve the efficiency of the system's ability to transfer and deliver electricity to California's end users and result in a net benefit in relation to the efficient use of energy within the PG&E service area.

Operation of the Project would comply with all applicable federal, state, and local energy use conservation requirements and would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant under this criterion.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency: *No Impact.*

Energy standards mentioned in the regulatory section above such as the Energy Policy Act of 2005, RPS, and Title 24 promote strategic planning and building standards that reduce consumption of fossil fuels, increase use of renewable resources, and enhance energy efficiency. In general, these regulations and policies specify strategies to reduce fuel consumption and increase fuel efficiencies and energy conservation. If the Project were to use energy resources in a wasteful manner, it would conflict with state energy standards. Construction, operations, and maintenance would be conducted in a manner consistent with the goals and strategies of state energy standards. Compliance with the state's regulation for in-use off-road diesel vehicles that requires idling limitations to no more than five minutes would ensure that fuel energy consumed in the construction phase would not be wasted through unnecessary idling. Project construction would be short-term and would not result in the permanent increased use of non-renewable energy resources.

There would be a minor increase in demand for electricity during the construction and operation phase of the Project. However, this would not conflict with long-term goals of the RPS Plan as the energy utilized on site would be provided by PG&E, which is required to comply with the RPS. Overall, the Project would increase the efficiency of the existing transmission network while utilizing the energy generated for the PG&E system that would be compliant with the RPS. Increasing the efficiency of the existing transmission network would improve California's ability to supply renewable energy to end-use customers specifically within the greater PG&E service area and to achieve statewide renewable energy goals. Additionally, when considering the implementation of the state RPS program, the Project would not prevent renewable energy sources from being used as a source of electricity in the future.

Project operation would include ongoing maintenance activities that would require the use of trucks and equipment that use non-renewable fuels. Fuel use for Project operation and maintenance would be minimal, requiring a negligible percentage of the overall fuel supplied to the Fresno County area. Operation and maintenance fuel use that would be associated with the Project would be neither wasteful nor inefficient and would not conflict with current energy conservation standards. There would be no impact under this criterion.

3.6.5 References

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- LS Power Grid California, LLC (LSPGC), 2021a. Proponent Environmental Assessment: Greenhouse Gas Screening Letter Appendix 4.8-A. Filed February 23, 2021.
- LSPGC, 2021b. Proponent Environmental Assessment: Fuel Use Calculations Appendix 4.6-A. Filed February 23, 2021.
- LSPGC, 2021c. Proponent Environmental Assessment: Energy section 4.6.4.1. Filed February 23, 2021.
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3.7 Geology and Soils

<u>Issues:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
VII. GEOLOGY AND SOILS — Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive or corrosive soil, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

Regional Geology

The Project site is approximately 3.3 miles southwest of the city of Huron in unincorporated Fresno County in the San Joaquin Valley. The Project site is within the southern portion of the Great Valley Geomorphic Province, which is an alluvial plain approximately 50 miles wide and 400 miles long in central California. The Great Valley is a basin in which there has been almost continuous deposition since the Late Jurassic Period (approximately 160 million years ago), and is filled with sediments eroded from the Sierra Nevada mountain range and the Coast Ranges.

The topography at the Project site is relatively flat (Terracon, 2019), with the elevation at the Project site varying from approximately 422 feet above mean sea level (AMSL) in the east to 391 feet AMSL, in the west (Google Earth, 2021).

Local Geology

Geologic mapping by Jennings and Strand (1958) and Dibble and Minch (2007) indicates that the surficial geology at the Project site is entirely Holocene-age alluvium (mapped as Holocene-age fan deposits by Jennings and Strand).¹ These deposits primarily consist of poorly consolidated silts and silty sands, with intermittent clay (Terracon, 2019). Older, Pleistocene-age deposits are not mapped at the surface within the Project but are in the vicinity of the Project site, approximately 2 miles to the west and southwest (Jennings and Strand, 1958; Dibblee and Minch, 2007; PaleoServices, 2020).² The Pleistocene-age deposits are mapped by Dibblee and Minch as Tulare Formation (Dibblee and Minch, 2007).

Soils

Soil Expansion

Expansive soils are soils that possess a “shrink-swell” characteristic, also referred to as linear extensibility. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying; the volume change is reported as a percent change for the whole soil. This property is measured using the coefficient of linear extensibility (COLE) (NRCS, 2017). The Natural Resources Conservation Service (NRCS) relies on linear extensibility measurements to determine the shrink-swell potential of soils. If the linear extensibility percent is more than 3 percent (COLE=0.03), shrinking and swelling may cause damage to building, roads, and other structures (NRCS, 2017). Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater.³ Expansive soils are typically very fine-grained and have a high to very high percentage of clay. Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

NRCS Web Soil Survey data indicate that the soil underlying the Project site has a 3.2 percent linear extensibility rating, which is considered moderate (NRCS, 2020a). The Preliminary Geotechnical Engineering Report by Terracon Consulting, Inc. (Terracon) does not include any information about the expansion potential of the soils at the Project site (Terracon, 2019).

Soil Corrosivity

The corrosivity of soils pertains to the potential for certain soils to cause an electrochemical or chemical reaction that can corrode or weaken uncoated steel or concrete. The rate at which these materials corrode is dependent on multiple variables, including but not limited to soil moisture, texture, mineral content, and acidity. The rate of corrosion of steel is based on soil moisture, particle-size distribution, acidity, and electrical conductivity. Corrosion of concrete is based on

¹ The Holocene Epoch is a period of time that spans from the present to 11,700 years ago.

² The Pleistocene Epoch is a period of time that spans from 11,700 to 2.6 million years ago.

³ Perched groundwater is a local saturated zone above the water table that typically exists above an impervious layer (such as clay) of limited extent.

the sulfate and sodium content, texture, moisture and acidity of the soil. The risk of corrosion typically is expressed as low, moderate, or high.

Laboratory corrosion testing results indicate that the soils underlying the Project site have a negligible corrosion potential, based on sulfate level, when considering corrosion to concrete (Terracon, 2019). NRCS Web Soil Survey data indicate that the underlying soils have a high potential to corrode steel and a moderate potential to corrode concrete (NRCS, 2020b). Additional testing during subsequent geotechnical investigations will determine the extent of the corrosion potential of the underlying soils.

Geologic Hazards

Earthquake Faults and Seismicity

There are no known Holocene-active⁴ faults or pre-Holocene⁵ faults within the Project site (CGS 2010). Multiple fault systems are present in the region outside of the Project site (CGS 2010). The closest known Holocene-active faults are the Great Valley 13 (GV 13) and Great Valley 14 (GV 14) faults of the Great Valley thrust fault system,⁶ approximately 0.1 mile and 0.5 mile northeast and southwest (respectively) of the Project site (USGS, 2021). Two other active fault systems in proximity to the Project site are the Nunez and San Andreas fault zones, approximately 18 miles northwest and 23 miles southwest of the Project site, respectively (CGS, 2010).

Fault Rupture

The Project site is not within an established Earthquake Fault Zone (EFZ) as delineated on an EFZ Map, required by the Alquist-Priolo Earthquake Fault Zoning Act. The nearest EFZs are the Nunez and San Andreas fault zones, 18 miles and 23 miles away, respectively (CGS, 2021).

The California Earthquake Hazards Zone Application (EQ Zapp) is an interactive map available on the California Geological Survey (CGS) website. The EQ Zapp allows users to view all available earthquake hazard zone data, including earthquake fault, liquefaction, and earthquake-induced landslide zones. Although there has been historic movement within the Great Valley thrust fault system (1983 Coalinga earthquake) (USGS, 1990, 1996), it has not been mapped as an EFZ according to EQ Zapp (CGS, 2021). This may be due to the fact that there was no surface rupture associated with the 1983 Coalinga earthquake event (USGS, 1990), and the location of the fault is inferred. Faults are designated EFZ if they display evidence of surface rupture within the last 11,700 years (CGS, 2018).

Ground Shaking

Ground shaking due to fault rupture is widely known to cause extensive damage to life and property. The extent of the damage varies by event and is determined by several factors,

⁴ Holocene-active faults show evidence of displacement within the Holocene Epoch, or the last 11,700 years, are considered active (CGS 2008).

⁵ Pre-Holocene faults have not shown evidence of displacement in the last 11,700 years (CGS 2008).

⁶ GV 13 and GV 14 are the naming conventions for the specific, individual sections of the Great Valley thrust fault system. The abbreviation “GV” stands for “Great Valley” (i.e., “GV 13” stands for “Great Valley 13 fault”) (USGS, 1996).

including (but not limited to): magnitude and depth of the earthquake, distance from epicenter, duration and intensity of the shaking, underlying soil and rock types, and integrity of structures.

There is a potential for strong seismic ground shaking due to the presence of the nearby Great Valley thrust, Nunez, and San Andreas fault systems. The 2014 Working Group on California Earthquake Probabilities⁷ (WGCEP) concluded that there is a 95 percent probability that a magnitude (M_w) 6.7 earthquake or higher could occur in Northern California within the next 30 years (from the time of publication of the study), with the San Andreas fault zone as a likely source (Field et al., 2015).

According to the ShakeMap, which corresponds with the earthquake planning scenario generated by the United States Geological Survey (USGS), if a M_w 6.6 event were to occur on the Great Valley 11 fault, the Project site may experience strong to very strong ground shaking with moderate to heavy damage expected (USGS, 2013). These data were based on the actual 1983 Coalinga earthquake event, in which the initial shock of the earthquake was felt as far away as San Francisco and Los Angeles (USGS, 1990).

Liquefaction and Lateral Spreading

Liquefaction is a phenomenon in which unconsolidated, water saturated sediments become unstable due to the effects of strong seismic shaking. During an earthquake, these sediments can behave like a liquid, potentially causing severe damage to overlying structures. Lateral spreading is a variety of minor landslide that occurs when unconsolidated liquefiable material breaks and spreads due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure.

According to the EQ Zapp, the Project site is not within or near any known liquefaction zone (CGS, 2021). Additionally, groundwater was not encountered during the borehole samples taken (to a depth of 51.5 feet below ground surface [bgs]) at the Project site (Terracon, 2019).

⁷ Also referred to as WGCEP 2014, this is a working group composed of seismologists from the U.S. Geological Survey (USGS), California Geological Survey (CGS), Southern California Earthquake Center (SCEC), and California Earthquake Authority (CEA).

Groundwater fluctuations can occur due to seasonal variations in rainfall, runoff, and other factors; therefore, groundwater levels at the Project site may be higher or lower than expected during construction.

Landslides

Landslides are one of the various types of downslope movements in which rock, soil, and other debris are displaced due to the effects of gravity. The potential for material to detach and move down slope depends on multiple factors including the type of material, water content, and steepness of terrain.

Landslides and other slope failures are not anticipated at the Project site due to the relatively flat surrounding area. Based on Google Earth imagery, there are no signs of previous landslides within or around the Project site. Additionally, based on a review of geologic maps of the area, there are no mapped historical landslides in the vicinity of the Project site (Jennings and Strand, 1958; Dibblee and Minch, 2007).

Subsidence and Ground Settlement

Land subsidence is the gradual settling or sudden sinking of the earth's surface due to subsurface movement of earth materials (USGS, 1999). Subsidence in alluvial valley areas is typically associated with groundwater or petroleum withdrawal, and regional ground subsidence or settlement is typically caused by compaction of alluvial deposits, or other saturated deposits in the subsurface (USGS, 1999).

The San Joaquin Valley has a history of land subsidence due to groundwater pumping and related compaction of sand and clay layers in Valley sediments. The Project site is in an area that has experienced moderate land subsidence in the past (Sneed et al. 2018). Measurements within the Huron area indicate that 2.4 to 4.9 meters of land subsidence occurred between 1926 to 1970, and current monitoring indicates that approximately 25 millimeters of land subsidence occurred in the region between 2008 and 2010 (Sneed et al., 2018).

Paleontological Resources

Paleontological resources are the fossilized remains or impressions of plants and animals, including vertebrates (animals with backbones; e.g., mammals, birds, fish), invertebrates (animals without backbones; e.g., starfish, clams, coral), and microscopic plants and animals (microfossils). They are valuable, non-renewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which the plants or animals became fossilized usually were quite different from the present environments in which the geologic formations now exist.

PaleoServices prepared the Paleontological Resources Technical Report for the Project (PaleoServices, 2020), which identifies and summarizes paleontological resources that may occur in and around the Project site. Additionally, the report evaluates the potential for impacts on paleontological resources during construction activities associated with the Project. The report provides mitigation recommendations to minimize any potential negative effects. The analysis provided in the report is based on a review of the available paleontological literature and geologic maps, as well as a record search of the paleontological collections at the San Diego Natural History Museum (SDNHM).

Based on geologic mapping, the surficial geology at the Project site consists of Holocene-age alluvium, with older, Pleistocene-age nonmarine deposits (Tulare Formation) mapped approximately 2 miles to the west and southwest of the Project site. Based on geologic mapping, the Pleistocene-age deposits are present in the subsurface at a conservatively estimated depth of approximately 15 feet bgs (PaleoServices, 2020). The record search from SDNHM indicates that there are no paleontological resources within the Project site, or within a 5-mile radius buffer. However, based on record search results from SDNHM, deposits that date to the Pleistocene Epoch are known to produce scientifically significant in Fresno County.

The University of California Museum of Paleontology (UCMP) fossil locality online database also indicates that there are no fossil localities within the Project site. The search does indicate that 10 vertebrate fossils have been discovered in Holocene-age sediments and 163 vertebrate fossils have been discovered in Pleistocene-age sediments in Fresno County (UCMP, 2021a). The nearest fossil locality is approximately 14 miles northwest of the Project site in Coalinga, California (O'Dell et al., 2017; UCMP, 2021a). Another notable fossil site is approximately 34 miles north-northwest of the Project site, in the town of Tranquillity (Hewes, 1946; UCMP, 2021a). Additionally, the UCMP records indicate that there are 52 fossil localities (14 vertebrate, 37 invertebrates, and 2 plant fossil localities) within Tulare Formation deposits throughout California (Alameda, Fresno, Kern, Kings, San Bernardino, San Joaquin, and Stanislaus counties) (UCMP, 2021b).

In general, Holocene-age deposits have a low potential to contain significant paleontological resources due to the relatively young age (less than 11,700 years old) of those deposits (SVP, 2010), however, Holocene-age fossils have been discovered in Fresno County (O'Dell et al., 2017; UCMP, 2021a). Conversely, Pleistocene-age sedimentary deposits are generally considered to have a moderate to high potential to contain significant paleontological resources due to their age and because there have been numerous similar finds in Fresno County (Hewes, 1946; Dundas et al., 1996; Trayler, 2012), and throughout California (Jefferson, 1991a, 1991b; SVP, 2010; Sub Terra Consulting, 2017).

While no records of paleontological resources were identified within the Project site, the presence of nearby Holocene and Pleistocene-age fossil discoveries indicates that the potential exists to encounter paleontological resources. As previously mentioned, Holocene-age deposits generally have a low potential to contain significant paleontological resources, so the deposits underlying the Project site have a low potential from 0 to 15 feet bgs (PaleoServices, 2020). Generally, Pleistocene-age deposits are considered to have a moderate to high potential to contain significant

paleontological resources; however, because the Pleistocene-age deposits underlying the Project site are only estimated to occur at 15 feet bgs and below, these deposits have an undetermined paleontological potential (PaleoServices, 2020).

3.7.2 Regulatory Setting

Federal

There are no federal regulations related to geology and soils that are applicable to the Project.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called “earthquake fault zones,” around the surface traces of active faults and published maps showing these zones. Within these zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits. The CGS *Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provide guidance for evaluating and mitigating seismic hazards (CGS 2008). The CGS is in the process of producing official maps based on USGS topographic quadrangles. To date, the CGS has not completed a delineation for the USGS quadrangle in which project components are proposed.

California Building Code

The California Building Code (CBC), codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. The California Building

Standards Commission administers Title 24, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California, and would apply to structures proposed on the Project site.

Relevant to the Project, Chapter 18 of the CBC covers the requirements of geotechnical investigations, including expansive soils (Section 1803); excavation, grading, and fills (Section 1804); load-bearing of soils (Section 1806); and foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigation measures to be considered in structural design, which may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

For a given project, a preliminary geotechnical report based on the initial design is prepared and may be considered as part of the CEQA process. The preliminary geotechnical report prepared for this Project (i.e., the Preliminary Geologic Engineering Report) has been prepared by Terracon Consulting, Inc. (2019).

California Public Utilities Commission General Orders 95 and 128

California Public Utilities Commission (CPUC) General Orders 95 and 128 apply to construction and reconstruction of overhead electric lines in California. The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of this order. Because the Proposed Project would include reconductoring of a power line, these General Orders would directly apply to the Proposed Project. For the purpose of recognizing relative hazards, lines are segregated into classes defined in CPUC Rule 20.6. These classes of lines and the relation of lines to each other and to objects over which they are constructed determine construction requirements.

Codes to which design of transmission lines must adhere include the National Electric Safety Code. Guidance documents are published by the Institute of Electrical and Electronics Engineers and ASCE, including ASCE 74, *Guidelines for Electrical Transmission Line Structural Loading*, which states, “Transmission structures are not typically designed for vibration caused by earthquakes because these loads are less than that of wind/ice combinations.” The exception to this general rule occurs if the tower is built in liquefiable materials, in which case the materials may not support the weight of the tower and tower foundation during a seismic event.

CPUC General Order 128, *Rules for Construction of Underground Electric Supply and Communication Systems*, provides general standards for the construction of underground electric systems.

NPDES Construction General Permit

Construction associated with the Project would disturb more than 1 acre of land surface affecting the quality of stormwater discharges into waters of the U.S. The Project would therefore be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb 1 acre or more of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards;
- Good site management “housekeeping”;
- Non-stormwater management;
- Erosion and sediment controls;
- Run-on and runoff controls;
- Inspection, maintenance, and repair; or
- Monitoring and reporting requirements.

The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving off site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring

program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before the construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the Project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

In the Project area, the Construction General Permit is implemented and enforced by the Central Valley Regional Water Quality Control Board, which administers the stormwater permitting program. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit. Dischargers are to notify the Central Valley Regional Water Quality Control Board of violations or incidents of non-compliance, and submit annual reports identifying deficiencies in the BMPs and explaining how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations.

3.7.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The Applicant has proposed the following applicant proposed measures (APMs) to address impacts related to geology, soils, seismicity, and paleontological resources attributable to Project construction, operations, and/or maintenance.

- **APM GEO-1:** The following measures would be implemented during construction to minimize impacts from geological hazards and disturbance to soils:

- Keep vehicle and construction equipment within the limits of the Project and in approved construction work areas to reduce disturbance to topsoil;
 - Prior to grading, salvage topsoil to a depth of six inches or to actual depth if shallower (as identified in site-specific geotechnical investigation report) to avoid mixing of soil horizons;
 - Avoid construction in areas with saturated soils, whenever practical, to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure;
 - Keep topsoil material on-site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporary disturbed areas. Temporary disturbance areas would be re-contoured following construction to match pre-construction grades. Areas would be allowed to re-vegetate naturally or would be reseeded with a native seed mix from a local source if necessary. On-site material storage would be sited and managed in accordance with all required permits and approvals; and
 - Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Removed vegetation would be disposed of off-site to an appropriate licensed facility or can be chipped on-site to be used as mulch during restoration.
- **APM GEO-2:** The structural requirements of the CBC are applicable to certain structural components of the Project, including the control enclosures. LSPGC and/or its contractors would design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Supplemental Geotechnical Engineering Report to be prepared and submitted to the CPUC upon completion.
 - **APM PALEO-1:** In the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), earthwork within the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.
 - **APM PALEO-2:** Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository (e.g., the SDNHM, the University of California Museum of Paleontology) along with associated field notes, photographs, and compiled fossil locality data. Donation of the fossils should be accompanied by financial support for initial specimen curation and storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

- **APM WQ-1:** Because the Project involves more than an acre of soil disturbance, a SWPPP would be prepared as required by the state NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs. Implementation of the plan would help stabilize disturbed areas and would reduce erosion and sedimentation. The SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:

- Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas;
- Strictly controlling vehicular traffic;
- Implementing a dust-control program during construction;
- Restricting access to sensitive areas;
- Using vehicle mats in wet areas; or
- Revegetating disturbed areas, where applicable, following construction.

In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.

- **APM WQ-2:** Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following:
 - Recovered groundwater would be contained on site and tested prior to discharge;
 - If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing);
 - Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains;
 - Water unsuitable for land application would be disposed of at an appropriately permitted facility; and
 - Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE [U.S. Army Corps of Engineers], RWQCB, and/or CDFW [California Department of Fish and Wildlife], as applicable).

PG&E Construction Measures

PG&E proposes to implement the following avoidance and minimization measures (AMMs) and BMPs to address impacts related to geology, soils, seismicity, and paleontological resources attributable to PG&E Interconnection Facilities construction and operation:

- **AMM- 3:** Minimize or avoid new disturbance to the extent practicable.
- **AMM-9:** Implement erosion control measures where necessary to reduce erosion and sedimentation in wetlands or waterways.
- **BMP-3: Addendum to the Geotechnical Investigation Report.** Prior to final design and construction of the PG&E Interconnection Facilities, PG&E would prepare an addendum to the Geotechnical Investigation Report prepared by Kleinfelder, 2015. The addendum would acknowledge and describe Segments GV13 and GV14 of the Great Valley Fault System, and verify that the project design is sufficient to withstand movement and the associated shaking that could occur on the two fault segments.
- **BMP-14: Stormwater Measures:** The Project EFS [Environmental Field Specialist] will provide the Stormwater Group with the following upon completion of the PER: Stormwater Needs Request Form, Soil Disturbance Calculation Spreadsheet, and a KMZ file showing the proposed work area. These documents shall be sent by the Project EFS, via email, to: stormwater@pge.com (if applicable).
- **BMP-15: Stormwater Management A-ESCPs:** Standard PG&E good housekeeping and stockpile management measures shall be implemented.
- **BMP-20: Worker Awareness Training.** Prior to the start of any ground-disturbing activity, PG&E's Cultural Resource Specialist (CRS) shall prepare archeological, historical and paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The CRS shall make the training materials available for review and comment by the Native American group that expressed interest in the project. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the CRS. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of resources that could be encountered within the Project site and the procedures to be followed if they are found. PG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, which documentation shall be made available upon request.
- **BMP-21: Inadvertent Paleontological Resource Discovery.** In the event that a paleontological resource is discovered during ground-disturbing activities, the foreman will temporarily divert the construction equipment around the find until it is assessed for scientific significance. A buffer of at least 50 feet around the discovery will be maintained for safety. The foreman will report the discovery to the site Supervisor and the PG&E point of contact given on the training brochure so that appropriate notifications can be issued. A temporary construction exclusion zone, consisting of lath and flagging tape in a 50-foot radius, will be erected around the discovery. Following fossil collection, the temporary construction exclusion zone will be removed and, once a professional paleontologist has assessed the situation, he/she will notify the site supervisor that construction activities may resume in the area of the find.

- **BMP-22: Paleontological Resource Monitoring, Salvage, and Treatment Protocols.** In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP-21) shall be followed; if significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review before continuing construction activities in the area of the find or as otherwise directed by the qualified paleontologist. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.
 - The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010).
 - The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring.
 - Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer.
 - If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.
 - Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion.
 - The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment.

3.7.4 Environmental Impacts

Methodology and Assumptions

The following impact analysis considers the potential impacts related to geology, soils, seismicity, and paleontological resources associated with the construction, operation and maintenance of the Project. Impacts related to geologic and seismic hazards would be considered significant if they resulted in injury, structural collapse, unrepairable facility or utility damage, or severe service

disruption. Impacts on paleontological resources would be considered significant if construction of the Project would disturb or destroy significant paleontological resources. This analysis assumes that construction and design of Project components would utilize standard site preparation practices, engineering designs, and seismic safety techniques that are required under the CBC and other state and local geologic hazard regulations.

Direct and Indirect Effects

- ai) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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): *Less than Significant*.**

According to the most updated and available information, the Project site is not within an established EFZ. However, the available information suggests that the Great Valley thrust fault system (GV 13 and GV 14) is within 0.5 mile of the Project site. Because the Great Valley thrust fault system is not officially designated as an EFZ, technically the Project is outside of one of these zones. While surface fault rupture cannot be entirely ruled out, the Project does not include the construction of any habitable structures, which is a key component of the Alquist-Priolo Earthquake Fault Zone Act.

Because there are no habitable structures associated with the Project site, impacts related to the risk of loss, injury, or death involving rupture of a known earthquake fault would be less than significant.

- aii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking: *Less than Significant with Mitigation*.**

Due to the proximity of the Project site to the Great Valley thrust, Nunez, and San Andreas fault systems, the Project site is potentially subject to strong seismic ground shaking. Should strong seismic ground shaking occur at the Project site, damage to Project structures could occur.

APM GEO-1 and APM GEO-2 would require that specific measures be implemented during construction to minimize impacts from geological hazards and disturbance to soils, and that all structural components of the Project comply with CBC requirements.

The Project would be subject to the seismic design criteria of the CBC, which requires that all improvements be constructed to withstand anticipated ground shaking from regional fault sources. The CBC requires that a licensed geotechnical engineer be retained to design the Project components to withstand probable seismically induced ground shaking and consolidate recommendations into a site-specific geotechnical report. In the case of the Project, the Preliminary Geologic Engineering Report provides specific soil engineering and design parameters that would be implemented during construction to reduce impacts associated with strong seismic ground shaking. The CBC requires that a final geotechnical investigation be

performed after Project design plans are finalized and prior to construction (in this case, this requirement will be fulfilled by the completion of the Supplemental Geotechnical Engineering Report discussed in APM GEO-2). All construction would adhere to the specifications, procedures, and site conditions contained in the final design plans, which would comply with the seismic recommendations of a California-registered, professional geotechnical engineer contained in the geotechnical report in accordance with the CBC. The final structural design would be subject to approval and follow-up inspection by the Fresno County Building and Safety Team. Final design requirements would be provided to the on-site construction supervisor and the Fresno County Building Inspector to ensure compliance.

However, although the Supplemental Geotechnical Engineering Report would be required as part of the final design as required by the CBC and by APM GEO-2, the Preliminary Geotechnical Engineering Report does not acknowledge the presence of the nearby sections of the Great Valley thrust fault system (GV 13 and GV 14). While the presence of the Great Valley thrust is not a concern as it relates to surface fault rupture (as there are no Project components intended for human occupancy), proximity to the Great Valley thrust could be a concern as it relates to seismic ground shaking. Although impacts related to seismic ground shaking would be analyzed in the Supplemental Geotechnical Engineering Report, confirmation of whether or not the Great Valley thrust is present could be vital information when considering the seismic design of Project components. Failure to account for seismic ground shaking due to the Great Valley thrust in the final Project designs could result in a significant impact.

A Geotechnical Investigation Report was prepared in 2015, which specifically analyzed the components of the PG&E Interconnection Facilities (Kleinfelder, 2015). Since that time there have been updates to the plans associated with the PG&E Interconnection Facilities that were not considered in the 2015 report, which now require additional analysis. Further, the seismic design parameters that were relied upon in the 2015 report were based on the 2013 edition of the CBC; the most current edition of the CBC became effective in 2019, with another update due in 2022. As discussed in Section 3.7.2, *Regulatory Setting*, in accordance with state law, the preparation of a supplemental report to update the 2015 Geotechnical Investigation Report would be required to ensure that the PG&E Interconnection Facilities are designed consistent with the current edition of the CBC.

To supplement the requirement to implement APM GEO-2, **Mitigation Measure GEO-1** would be required to ensure that the Supplemental Geotechnical Report for the Orchard Substation Facilities includes an analysis of the Great Valley thrust fault system (including GV 13 and GV 14). Although AMP GEO-2 would not apply to the PG&E Interconnection Facilities, state law requires that the 2015 Geotechnical Investigation Report be updated to account for the updates to the PG&E Interconnection Facilities and the CBC; PG&E proposes implementation of BMP-3, which would also apply to the supplemental report that would update the 2015 report to ensure that it accounts for the Great Valley thrust fault system.

Implementation of APM GEO-1, APM GEO-2 (including the supplemental Mitigation Measure GEO-1), BMP-3, and the applicable CBC requirements and local agency enforcement would ensure that the Project would not directly or indirectly cause substantial adverse effects, including

the risk of loss, injury, or death involving strong seismic ground shaking. Therefore, impacts related to ground shaking during Project construction, operation and maintenance, or decommissioning would be less than significant.

Mitigation Measure GEO-1: Fault Study. In order to account for any effects related to strong seismic ground shaking due to the presence of the Great Valley thrust fault system, the required supplemental geotechnical report for the Orchard Substation Facilities shall account for the presence of the Great Valley thrust fault system. The report shall be prepared by a qualified geotechnical engineer licensed by the State of California. The report shall include an analysis of the presence of the Great Valley thrust fault system and how its proximity to the Project would inform the seismic design of the Project components.

aiii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction: *Less than Significant.*

Available data suggest that the risk of soil liquefaction at the Project site is low. This is in part due to the absence of groundwater within 50 feet of the ground surface underlying the Project site, which is required to liquefy soils during an earthquake. Additionally, data from the CGS EQ Zapp indicate that the Project site is not located within a liquefaction hazard zone.

As discussed in Impact aii), above, APM GEO-1 and APM-GEO 2 would be implemented during Project construction, which would reduce impacts related to soil liquefaction (in the unlikely event that strong seismic ground shaking would cause liquefaction at the Project site). Additionally, the Supplemental Geotechnical Engineering Reports would re-evaluate the conditions at the Project site to ensure that Project structures are designed to withstand impacts related to liquefaction and other seismic-related ground failures.

Compliance with design recommendations provided in the Supplemental Geologic Engineering Reports and CBC requirements would ensure the risks related to liquefaction and seismic-related ground failures would be less than significant.

aiv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides: *No Impact.*

The Project site has nearly flat topography and a very gentle long slope. There are no mapped landslides on or around the site. For these reasons, the potential for landslide hazards at the site is very low, and there would be no impact related to landslide hazards.

b) Result in substantial soil erosion or the loss of topsoil: *Less than Significant.*

Project construction would include ground-disturbing activities that could increase the risk of erosion or sediment transport, such as soil excavation, grading, trenching, and soil stockpiling. Because the overall footprint of construction activities would exceed one acre, the Project would be required to comply with the Construction General Permit, described above in Section 3.7.2, *Regulatory Setting*. This state requirement was developed to ensure that stormwater is managed

and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a SWPPP, which requires implementation of BMPs to control stormwater run-on and runoff from construction work sites. BMPs may include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures to be identified by a qualified SWPPP developer that would substantially reduce or prevent erosion from occurring during construction.

As discussed in Chapter 2, *Project Description*, the Orchard Substation would include a stormwater management system in the form of a stormwater detention basin, which would reduce soil erosion impacts caused by stormwater. Additionally, APM WQ-1, APM WQ-2, AMM-3, AMM-9, BMP-14, and BMP-15 include measures to reduce the impacts of soil erosion and soil loss.

Compliance with these independently enforceable existing requirements would reduce the Project's potential impacts associated with soil erosion and loss of topsoil during construction to less than significant.

c) Be located on 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: *Less than Significant.*

As previously discussed, there would be a less-than-significant impact related to liquefaction or other seismic-related ground failure, and there would be no impact related to landslides. The area is relatively flat with no evidence of landslides. The Project site is in an area that has experienced moderate land subsidence in the past, and the San Joaquin Valley has a history of land subsidence due to groundwater pumping. However, groundwater pumping is not proposed as part of the Project and would not cause subsidence of the soil underlying the Project site. Groundwater was not encountered during borehole data collection; however, groundwater levels can fluctuate seasonally and could be encountered during construction. Dewatering would be required if groundwater is encountered during construction activities, but the dewatering would be minimal in scale and is not expected to contribute to local subsidence.

Nonetheless, compliance with APM GEO-1, APM GEO-2, and CBC design requirements would ensure that impacts related to unstable soils would be less than significant.

d) Be located on expansive or corrosive soil, creating substantial direct or indirect risks to life or property: *Less than Significant.*

NRCS Web Soil Survey data suggest that the soils underlying the Project site have a moderate expansion potential. Additionally, while the Preliminary Geotechnical Engineering Report suggests that the corrosion potential of the soils underlying the Project site is negligible, NRCS Web Soil Survey data indicate that the underlying soils have a high potential to corrode steel and a moderate potential to corrode concrete. The potential impacts to life or property associated with expansive and corrosive soils could be significant if not addressed appropriately.

As stated above, CBC would require the preparation of supplemental geotechnical report, which would include further site investigations. If these investigations find expansive or corrosive soils at the Project site, the report would include recommendations to ensure that any structural impacts resulting from expansive or corrosive soils on-site would be avoided, removed, or engineered to be suitable. Adherence to the requirements of the CBC and geotechnical investigation would avoid impacts resulting from potentially expansive soils on the Project site. The Project would not create substantial direct or indirect risks to life or property related to expansive soils, and impacts would 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: *No Impact.*

Construction activities would be served by portable sanitary systems that would not be connected to the local wastewater system. Sanitary waste from the portable sanitary systems would be pumped routinely and would be transported by a licensed sanitary waste service for off-site disposal. Because the Project would not include the use of septic tanks or alternative wastewater disposal systems, soils capable of adequately supporting such systems would not be required. Therefore, there would be no impact associated with this criterion.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature: *Less Than Significant with Mitigation.*

Geologic mapping indicates that the surficial deposits at the Project site consist of Holocene-age fan-derived alluvial sediments, with older, Pleistocene-age sediments (Tulare Formation) mapped in the vicinity and likely present at an estimated depth of approximately 15 feet bgs. Generally, surficial Holocene-age sediments have a low potential to contain significant paleontological resources, although there have been several significant fossils discovered within Holocene-age sediments in Fresno County. Pleistocene-age sediments are considered to have a high potential to contain significant paleontological resources due to their age and the well-documented presence of significant fossil finds in Fresno County and throughout California. However, because the 15-foot depth is an estimation, and the actual depth to Pleistocene-age deposits is unknown, the potential to encounter significant paleontological resources below 15 feet bgs is undetermined. Given the proximity of past fossil discoveries in the area and the presence of sediments with low to undetermined potential to contain paleontological resources, the Project site has the potential to yield unique paleontological resources. The risks of uncovering or destroying paleontological resources increase with the amount of ground disturbance associated with a project; ground-disturbing activities that would not require mass excavation of soil (i.e., post driven into the ground) would have a minimal impact on paleontological resources, as there would be little to no material to observe.

Project construction would require varying degrees of ground disturbance, including 36,000 cubic feet of excavated earthwork material and a maximum excavation depth of 32 feet bgs. A majority of the major equipment (i.e., power transformers, power circuit breakers, reactors, IGBT value/Control Exposures, and cooling equipment) would require foundations set between 2 and 4.5 feet bgs except for the 500 kV bus supports and 500 kV take-off towers, which would be installed at approximate

depths of 20 and 30 feet, respectively. A 1,250-cubic-yard detention basin is also planned as part of the Project; the exact dimensions (i.e., depth below the ground surface) of the detention basin unknown at this time. The PG&E interconnection is estimated to require a foundation for the dead-end structure, which would be installed at a depth of approximately 32 feet bgs. For the Project components that would require excavations and/or other ground disturbance below 15 feet bgs (i.e., 500 kV bus supports and take-off towers, and the foundation for the dead-end structure) have the potential to encounter paleontological resources.

To avoid any impacts on paleontological resources during construction, APM PALEO-1 and APM PALEO-2 would be implemented, requiring that all earthwork halt in the event of a fossil discovery and that a qualified paleontologist assess the discovery. If the discovery is determined to be significant by the qualified paleontologist, it will be recovered using appropriate recovery techniques, identified, catalogued, and prepared for storage in a recognized paleontological repository. In the event of a discovery, the qualified paleontologist may recommend paleontological resource monitoring on an as-needed basis.

However, APM PALEO-1 and APM PALEO-2 do not identify personnel qualification standards, worker training standards, and monitoring protocols in the event that monitoring is deemed necessary. Therefore, as a supplement to the requirement to implement APM PALEO-1 and APM PALEO-2, **Mitigation Measure GEO-2** and **Mitigation Measure GEO-3** would be required, to ensure that personnel qualification standards are met, proper worker training is implemented, and appropriate monitoring protocols are in place (in the event that monitoring is necessary).

To avoid impacts on paleontological resources during the construction of the PG&E Interconnection Facilities, BMP-20 (Worker Awareness Training) and BMP-21 (Inadvertent Paleontological Resource Discovery) would be implemented. BMP-20 and BMP-21 require a worker awareness training prior to construction, that all earthwork halt in the event of a fossil discovery, and that a qualified paleontologist assess the discovery.

However, BMP-20 and BMP-21 do not identify personnel qualification standards (for the professional paleontologist), monitoring protocols in the event that monitoring is deemed necessary, or proper salvage and treatment procedures (in the event of a significant discovery).

If, in the process of implementing BMP-21 there is a significant discovery (based on assessment by qualified paleologist), paleontological resources monitoring may be required (on an as-needed basis). To ensure that there are proper monitoring protocols in place, PG&E proposes to implement BMP-22. BMP-22 would ensure that a qualified paleontologist prepared a Paleontological Resources Mitigation and Monitoring Plan (PRMMP), and qualified paleontological resource monitors implement the PRMMP. Additionally, BMP-22 would include procedures for salvaging and treatment of any significant discoveries.

Implementation of APM PALEO-1 and APM PALEO-2 (including the supplemental Mitigation Measure GEO-2 and Mitigation Measure GEO-3) would ensure that significant paleontological resources are not inadvertently destroyed as a result of the Orchard Substation Facilities. Additionally, implementation of BMP-20, BMP-21, and BMP-22 would ensure that significant paleontological resources are not impacted during the construction of the PG&E Interconnection

Facilities. The Orchard Substation Facilities impact on paleontological resources would be less than significant with mitigation incorporated.

Mitigation Measure GEO-2: Worker Awareness Training and Monitoring

Protocols. Prior to the start of any ground-disturbing activity, the project owner shall retain a qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) to prepare paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the qualified paleontologist. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found. The project owner and/or their contractors shall retain Documentation demonstrating that all construction personnel attended the training prior to the start of work on the site and shall provide the documentation to the CPUC Project Manager upon request.

Mitigation Measure GEO-3: Paleontological Resource Monitoring, Salvage, and Treatment Protocols.

In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP-21) shall be followed; If significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review and approval before continuing construction activities in the area of the find. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.

- The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010).
- The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring.
- Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer.
- If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.

- Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion.
- The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment.

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3.8 Greenhouse Gas Emissions

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
VIII. GREENHOUSE GAS EMISSIONS —				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

Climate Change

According to the U.S. Environmental Protection Agency (USEPA), the term “climate change” refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (over several decades or longer). There is scientific consensus that climate change is occurring and that human activity contributes in some measure (perhaps substantially) to that change. Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). Emissions of GHGs, if not sufficiently curtailed, are likely to contribute further to increases in global temperatures.

The potential effects of climate change in California include sea level rise and reductions in snowpack, as well as an increased number of extreme-heat days per year, high ozone days, large forest fires, and drought years (CARB, 2017). Globally, climate change could affect numerous environmental resources through potential, though uncertain, changes in future air temperatures and precipitation patterns. According to the International Panel on Climate Change (IPCC), the projected effects of climate change are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2021):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures (fewer cold days and frost days over nearly all land areas);
- Reduced diurnal temperature range over most land areas;
- Increase in heat index over most land areas; and
- More intense precipitation events.

In addition, many secondary effects are projected to result from climate change, including a global rise in sea level, ocean acidification, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. The possible outcomes and feedback mechanisms involved are not fully understood, and much research remains to be done; however, over the long term, the potential exists for substantial environmental, social, and economic consequences.

Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the Earth's temperature; however, emissions from human activities—such as fossil fuel-based electricity production and the use of motor vehicles—have elevated the concentration of GHGs in the atmosphere. This accumulation of GHGs has contributed to an increase in the temperature of the Earth's atmosphere and to global climate change.

Greenhouse Gas Emissions

GHG emissions that result from human activities primarily include carbon dioxide (CO₂), with much smaller amounts of nitrous oxide (N₂O); methane (CH₄), often from unburned natural gas; sulfur hexafluoride (SF₆) from high-voltage power equipment; and hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) from refrigeration/chiller equipment. These GHGs have different warming potentials (i.e., the amount of heat trapped in the atmosphere by a certain mass of the gas), and CO₂ is used as the reference gas for climate change. Therefore, GHG emissions are quantified and reported as CO₂-equivalent (CO₂e) emissions based on the reference gas. For example, while SF₆ represents a small fraction of the total annual GHGs emitted worldwide, this gas is very potent, with 23,900 times the global warming potential of CO₂. Therefore, an emission of 1 metric ton of SF₆ would be reported as 23,900 metric tons CO₂e. The global warming potentials of CH₄ and N₂O are 25 times and 298 times that of CO₂, respectively (CARB, 2021a). The principal GHGs resulting from human activity that enter and accumulate in the atmosphere are described below.

Carbon Dioxide

CO₂ is a naturally occurring gas that enters the atmosphere through natural as well as anthropogenic (human) sources. Key anthropogenic sources include the burning of fossil fuels (e.g., oil, natural gas, and coal), solid waste, trees, wood products, and other biomass, as well as industrially relevant chemical reactions such as those associated with manufacturing cement. CO₂ is removed from the atmosphere when it is absorbed by plants as part of the biological carbon cycle.

Methane

Like CO₂, CH₄ is emitted from both natural and anthropogenic sources. Key anthropogenic sources of CH₄ include gaseous emissions from landfills, releases associated with mining and materials extraction industries (in particular coal mining), and fugitive releases associated with the extraction and transport of natural gas and crude oil. CH₄ emissions also result from livestock and agricultural practices. Small quantities of CH₄ are released during fossil fuel combustion.

Nitrous Oxide

N₂O is also emitted from both natural and anthropogenic sources. Important anthropogenic sources include industrial activities, agricultural activities (primarily the application of nitrogen fertilizer), the use of explosives, combustion of fossil fuels, and decay of solid waste.

Fluorinated Gases

HFCs, PFCs, and SF₆ are synthetic gases emitted from a variety of industrial processes, and they contribute substantially more to the greenhouse effect on a pound-for-pound basis than the GHGs described previously. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in small quantities, but because of their potency, they are sometimes referred to as “high global warming potential gases.” Fluorinated gases in the form of SF₆ are used in electrical equipment such as switchgear and circuit breakers that would be associated with the Project.

Greenhouse Gas Sources

Anthropogenic GHG emissions in the United States are derived mostly from the combustion of fossil fuels for transportation and power production. Energy-related CO₂ emissions resulting from fossil fuel exploration and use account for approximately three-quarters of the human-generated GHG emissions in the United States, primarily in the form of CO₂ emissions from burning fossil fuels. More than half of the energy-related emissions come from large stationary sources, such as power plants; approximately one-third derive from transportation sources; and a majority of the remaining sources are industrial processes, agriculture, commercial, and residential (USEPA, 2021a).

Statewide emissions of GHG from relevant source categories for 2013 through 2019 are summarized in **Table 3.8-1**. Specific contributions from individual air basins, such as the San Joaquin Valley Air Basin (SJVAB), which encompasses the Project site, are included in the emissions inventory but not itemized by air basin. In 2019, California produced 418.2 million gross metric tons of CO₂e emissions. Transportation was the source of 41 percent of the state’s GHG emissions, followed by industrial at 24 percent, electricity generation at 14 percent, and commercial and residential sources at 14 percent; agriculture and forestry composed the remaining 8 percent (CARB, 2021b).

**TABLE 3.8-1
 CALIFORNIA GREENHOUSE GAS EMISSIONS (MILLION METRIC TONS CO₂E)**

Emission Inventory Category	2013	2014	2015	2016	2017	2018	2019	
Electricity Generation (In State)	51.60	52.17	50.97	42.27	38.31	38.63	37.25	9%
Electricity Generation (Imports)	40.09	36.86	33.99	26.40	24.00	24.62	21.72	5%
Transportation	166.1	167.4	170.9	174.3	175.6	174.0	170.3	41%
Industrial	102.3	103.4	101.3	100.3	100.3	100.8	99.9	24%
Commercial	21.43	21.29	22.03	23.19	23.40	23.90	24.17	6%
Residential	32.04	27.19	27.95	29.28	30.39	30.48	33.02	8%
Agriculture and Forestry	33.83	34.68	33.53	33.29	32.49	32.75	31.75	8%
Not Specified (Solvents & Chemicals)	0.01	0.01	0.25	0.08	0.01	0.08	0.1	<0.1%
Total Gross Emissions	447.4	443.0	440.7	429.0	424.5	425.1	418.2	100%

NOTES:

The greenhouse gas percentages of the total gross emissions for year 2019 were rounded to the nearest whole number.

SOURCE: CARB, 2021b.

3.8.2 Regulatory Setting

Federal

Clean Air Act

On April 2, 2007, in *Massachusetts v. USEPA* (549 US 497), the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. On April 17, 2009, the USEPA Administrator signed proposed “endangerment” and “cause or contribute” findings for GHGs under Section 202(a) of the Clean Air Act. The USEPA found that six GHGs, taken in combination, endanger both the public health and the public welfare of current and future generations. Pursuant to Code of Federal Regulations (CFR) Title 40, Part 52, *Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule*, USEPA has mandated that Prevention of Significant Deterioration (PSD) and Title V requirements apply to facilities whose stationary-source CO₂e emissions exceed 100,000 tons per year (USEPA, 2020). The Project would not trigger PSD or Title V permitting under this regulation because it would generate less than 100,000 tons of CO₂e emissions per year.

40 CFR Part 98. Use of Electric Transmission and Distribution Equipment

Pursuant to federal regulations (i.e., 40 CFR Part 98, Subpart DD), operators of certain electrical facilities, such as SF₆-containing circuit breakers, are required to report SF₆ emissions to the USEPA (USEPA, 2021b). SF₆-containing circuit breakers associated with the Project would be subject to reporting under this regulation.

State

A variety of statewide rules and regulations mandate the quantification and, if emissions exceed established thresholds, the reduction of GHGs. CEQA requires lead agencies to evaluate project-related GHG emissions and the potential for projects to contribute to climate change and to provide appropriate mitigation in cases where the lead agency determines that a project would result in a significant addition of GHGs to the atmosphere.

Executive Order S-3-05

In June 2006, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which established the following statewide emission-reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

This executive order does not contain any requirements that directly pertain to the Project; however, future actions taken by the State of California to implement these goals may affect the Project, depending on the specific implementation measures that are developed.

Assembly Bill 32

California Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, required the California Air Resources Board (CARB) to establish a statewide GHG emissions cap for 2020 based on 1990 emissions levels. AB 32 required CARB to adopt regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB also was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which had to be achieved by 2020. CARB established this limit in December 2007 at 427 million metric tons of CO₂e. This is approximately 30 percent below forecasted “business-as-usual” emissions of 596 million metric tons of CO₂e in 2020, and about 10 percent below average annual GHG emissions during the period 2002 through 2004 (CARB, 2009). In the interest of achieving the maximum technologically feasible and cost-effective GHG emission reductions, AB 32 permits the use of market-based compliance mechanisms and requires CARB to monitor compliance with and enforce any rule, regulation, order, emissions limitation, emissions reduction measure, or market-based compliance mechanism that it adopts.

Climate Change Scoping Plan (AB 32 Scoping Plan)

In December 2008, CARB approved the AB 32 Scoping Plan, outlining the State of California’s strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimates a reduction of 174 million metric tons CO₂e (about 191 million tons) from the transportation, energy, agriculture, forestry, and high-climate-change-potential sectors, and proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California’s energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every 5 years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. Appendices C and E of the adopted 2008 AB 32 Scoping Plan include a list of 39 recommended action measures to reduce GHG emissions (CARB, 2009). Of these measures, only one was directly relevant to the Project. Measure H-6, *High GWP Gases*, was designed to reduce emissions of SF₆ within the electric utility sector and at particle accelerators by requiring the use of best achievable control technology for the detection and repair of leaks, and the recycling of SF₆.

CARB released its first Scoping Plan Update in May 2014, its second Scoping Plan Update in November 2017 (CARB, 2014; CARB, 2017), and the third update is currently in progress. On December 14, 2017, CARB approved the final version of California’s *2017 Climate Change Scoping Plan* (2017 Scoping Plan Update), which outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels (CARB, 2017). The 2017 Scoping Plan Update identifies key sectors of the implementation strategy, which includes improvements in low carbon energy industry, transportation sustainability, statewide 2030 emissions limit is 260 million metric tons CO₂e, and that further commitments will need to be made to achieve an additional reduction of 50 million metric tons CO₂e beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the Cap-and-Trade Program to meet the aggressive 2030 GHG emissions goal represented by Senate Bill (SB) 32 and ensure achievement of the 2050 limit set forth by Executive Order B-30-15. There are no recommended actions identified in the Scoping Plan Updates that are directly applicable to the Project.

California Renewable Energy Programs

In 2002, California initially established its Renewables Portfolio Standard (RPS), with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. State energy agencies recommended accelerating that goal, and California Executive Order S-14-08 (November 2008) required California utilities to reach the 33 percent renewable electricity goal by 2020, consistent with the AB 32 Scoping Plan. In April 2011, SB 2 of the First Extraordinary Session (SB X1-2) was signed into law. SB X1-2 expressly applied the new 33 percent RPS by December 31, 2020, to all retail sellers of electricity and established renewable energy standards for interim years prior to 2020. In 2018, SB 100, the California Clean Energy Act of 2017, was signed into law. This bill established a target to supply the state with 100 percent renewable and zero-carbon energy resources by 2045.

Mandatory Reporting Requirements

Pursuant to California Code of Regulations (CCR) Title 17, Sections 95100–95158, operations of large industrial stationary combustion and process emissions sources that emit 10,000 metric tons CO₂e or more per calendar year are required to report and verify their GHG emissions to CARB. Reporting for GHG emissions from the generation of electricity traveling through power transmission facilities and substations are completed by the generation facility operators. As indicated in Table 3.8-5 in Section 3.8.4, *Environmental Impacts* (see the discussion of item a), the total amortized GHG emissions for the Project would be 506 metric tons per year, which is below the AB 32 reporting threshold; therefore, the Project would not be subject to the AB 32 mandatory reporting requirements.

Market-Based “Cap-and-Trade” Compliance Mechanism

AB 32 allows the use of market-based compliance mechanisms to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 also requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts. In response, CARB adopted a cap-and-trade program that covers major sources of GHG emissions such as refineries and power plants. The program includes an annual emissions cap that declines over time. CARB’s cap-and-trade program applies to facilities that would emit 10,000 metric tons or more of CO₂e per year. Because the total amortized GHG emissions for the Project are estimated at 253 metric tons per year, the cap-and-trade program would not apply to the Project. (See Section 3.8.4, *Environmental Impacts*, for a discussion and breakdown of the construction-related and operational GHG emissions associated with the Project.)

Senate Bill 97

In 2007, the California Legislature passed SB 97, which required amendment of the CEQA Guidelines to incorporate analysis and mitigation of GHG emissions from projects subject to CEQA. The amendments took effect March 18, 2010. The amendments added Section 15064.4 to the CEQA Guidelines, specifically addressing the potential significance of GHG emissions. Section 15064.4 calls for a “good faith effort” to “describe, calculate or estimate” GHG emissions and indicates that the analysis of the significance of any GHG impacts should include consideration of the extent to which projects would:

- Increase or reduce GHG emissions;
- Exceed a locally applicable threshold of significance; or
- Comply with “regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.”

The CEQA Guidelines also state that a project may be found to have a less-than-significant impact related to GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (14 CCR Section 15064(h)(3)). Importantly, however, the CEQA Guidelines do not require or recommend a specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions.

Executive Order B-30-15

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 5-Year Infrastructure Plan;
- Update the *Safeguarding California Plan*, the state climate adaptation 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 (Office of the Governor, 2015).

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. As discussed below, on September 8, 2016, Governor Brown signed SB 32, which codified the 2030 reduction target (i.e., 40 percent below 1990 levels) called for in Executive Order B-30-15. CARB's 2017 Scoping Plan update (discussed above) addresses the 2030 target.

Senate Bill 32 and Assembly Bill 197

Signed into law on September 8, 2016, SB 32 (Amendments to California Global Warming Solutions Act of 2006: Emission Limit) amended Health and Safety Code Division 25.5 and codified the 2030 target in Executive Order B-30-15, establishing a new climate pollution reduction target of 40 percent below 1990 levels by 2030. The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by Executive Order B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels. SB 32 states the intent of the legislature to continue to reduce GHGs for the protection of all areas of the state and especially the state's most disadvantaged communities, which are disproportionately impacted by the deleterious effects of climate change on public health. AB 197 included provisions to ensure that the benefits of state climate policies include disadvantaged communities.

Regulation for Reducing SF₆ Emissions from Gas Insulated Switchgear

The purpose of this regulation (17 CCR 95350 et seq.) is to achieve GHG emission reductions by reducing SF₆ emissions from gas-insulated switchgear. Owners of such switchgear must not exceed maximum allowable annual emissions of 1.0 percent of the total SF₆ capacity of all of the owner's active gas-insulated switchgear equipment. As defined by the regulation, the annual emissions rate equals the gas-insulated switchgear owner's total annual SF₆ emissions from all active gas-insulated switchgear equipment divided by the average annual SF₆ nameplate capacity of all active gas-insulated switchgear equipment. Owners must regularly inventory gas-insulated switchgear equipment, measure quantities of SF₆, and maintain records of these for at least 3 years. Additionally, by June 1 of each year, owners also must submit an annual report to CARB's Executive Officer for emissions that occurred during the previous calendar year (CARB, 2011).

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. CPUC General Order 131-D (GO 131-D), Section XIV.B, states that "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters" (CPUC, 1995). Public utilities are directed to consider local regulations and consult with local agencies, but county regulations are not applicable, as Fresno County does not have jurisdiction over the Project. Because the CPUC has exclusive jurisdiction, the Project is not subject to local land use and zoning regulations or discretionary permits. Details below that relate to local regulations are provided for informational purposes and to assist with California Environmental Quality Act (CEQA) review. Although LS Power Grid California, LLC (LSPGC or the Applicant) and Pacific Gas and Electric Company (PG&E) are not subject to local discretionary permitting, ministerial permits would be secured as required.

San Joaquin Valley Air Pollution Control District

CEQA requires lead agencies to establish specific procedures for administering its responsibilities under CEQA, including orderly evaluation of projects and preparation of environmental documents. The Project site is located within the SJVAB, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). In part, as a response to this CEQA requirement, in August 2008, SJVAPCD's Governing Board adopted the Climate Change Action Plan (CCAP) (SJVAPCD, 2009a). Based on that plan, SJVAPCD created guidance to evaluate GHG significance. The guidance covers projects that include Best Performance Standards (BPS), which are more typical of residential or commercial-type projects, and projects that do not implement BPS, such as the Project (SJVAPCD, 2009b).

CEQA reviews for projects implementing BPS would not require quantification of project-specific GHG emissions. Consistent with the CEQA Guidelines, such projects would be determined to have less-than-significant individual and cumulative impacts for GHG emissions. For CEQA reviews of projects not implementing BPS, SJVAPCD recommends quantifying

project-specific GHG emissions and demonstrating that project-specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002–2004 baseline period. Projects that would achieve at least a 29 percent GHG emissions reduction compared to BAU are considered consistent with the AB 32 emissions reduction goal for 2020.

3.8.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following applicant proposed measure (APM) pertaining to GHG emissions has been proposed by the Applicant and would be implemented as part of the Orchard Substation Facilities portion of the Project.

- **APM GHG-1:** The following measures shall be implemented to minimize greenhouse gas emissions from all construction sites:
 - If suitable park-and-ride facilities are available in the Project vicinity, construction workers shall be encouraged to carpool to the job site.
 - Demolition debris shall be recycled for reuse to the extent feasible.
 - The contractor shall use line power instead of diesel generators at all construction sites where line power is available.
 - The contractor shall maintain construction equipment per manufacturing specifications.

PG&E Construction Measures

PG&E would implement the following best management practice (BMP) to address impacts associated with GHG emissions attributable to construction and operation of the PG&E Interconnection Facilities. No avoidance and minimization measures are directly applicable to the discussion of impacts.

- **BMP-10: Sulfur Hexafluoride (SF₆) Gas Material/Waste Management.** Before accessing any equipment that may contain SF₆ gas byproduct waste, contact your local Environmental Field Specialist (EFS) at least two weeks in advance for assistance in arranging cleanup, transportation and disposal. PSC will retrieve, package, label and transport SF₆ byproducts. All SF₆ waste that is removed from a Substation must have proper shipping papers which could include a remote waste shipping paper or a manifest (manifests require a temporary EPA ID number).
 - Substation personnel shall contact PSC to retrieve, package, label, and transport SF₆ byproduct waste (i.e. fluorides of sulfur, metallic fluorides, etc.). All SF₆ byproduct waste that is removed must have proper shipping papers, which could include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA ID number).

- SF₆ cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001.

Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF₆ in all facilities. ASG provides 24-hour service in response to events involving SF₆ as well as delivery and removal of all SF₆ cylinders. Contact information: <https://www.advancedspecialtygases.com>

3.8.4 Environmental Impacts

Methodology and Assumptions

Significance Criteria

The Project was analyzed using SJVAPCD's Business-as-Usual approach, which is set at the year 2004. However, instead of using SJVAPCD's recommended 29 percent reduction under BAU to gauge significance, which was designed to meet the 2020 emissions reduction goal of AB 32 (i.e., 1990 levels, equivalent to 30 percent below BAU), this analysis uses a 56 percent reduction under BAU to assess significance to reflect the 2030 emissions reduction goal of SB 32 (i.e., 40 percent below 1990 levels, equivalent to 58 percent below BAU). To maintain consistency with SJVAPCD's reduction goal, the significance criterion relative to the 2030 goal used in this analysis was estimated by applying the ratio of the state's 2030 and 2020 reduction goals to SJVAPCD's reduction goal for 2020. If the Project would achieve a reduction of less than 56 percent relative to the 2004 BAU scenario, it would have a less-than-significant impact.

Assumptions

The Orchard Substation would require the construction and operation of two STATCOM units and ancillary components. Construction would permanently disturb a total of approximately 8.2 acres of the 20-acre Orchard Substation Facilities site. The operations and maintenance (O&M) activities required for the Orchard Substation are anticipated to produce limited sources of exhaust emissions from worker trips and energy usage from on-site auxiliary equipment usage (e.g., control room heating, ventilation, and air conditioning [HVAC] units, communications equipment, and facility lighting). The Orchard Substation would also include the installation and operation of two 500-kilovolt (kV) gas insulated circuit breakers, which would contain and leak SF₆ used for insulation.

The Applicant provided construction assumptions, O&M activity assumptions, and operations energy usage to be utilized as input for CalEEMod (version 2016.3.2) to model emissions for both the BAU scenario (2004) and the Orchard Substation Facilities portion of the Project (2022 through 2023). It is common practice to amortize construction-related GHG emissions over a project's lifetime to include these emissions as part of a project's annualized total emissions so that GHG reduction measures would address construction GHG emissions as part of the operational GHG reduction strategies (County of San Diego, 2015; SLOCAPCD, 2012; SCAQMD, 2008). As stated in Chapter 2, *Project Description*, the expected usable life of the Project facilities is estimated to be 40 years. Therefore, construction emissions were amortized over 40 years based on the projected operational life of the Project. Emissions from the eventual

decommissioning would be similar to those from Project construction. To be conservative, the emissions from decommissioning were assumed to be the same as those from construction. This assumption is considered conservative because decommissioning would result in fewer emissions of GHGs than construction. At the current level of Orchard Substation design, the final SF₆ volume within the switchgear and circuit breakers is not yet known. However, the manufacturer was able to provide typical values, and these were used in this analysis. In addition, the Project would comply with CARB regulations regarding SF₆ leak rates. The typical volume of SF₆ gas was used in conjunction with regulatory limits for the leak rate to compare Project emissions to BAU.

The Applicant's emission calculations were independently reviewed by the CPUC's consultant, Environmental Science Associates (ESA), and were found to be technically adequate other than an error in the operational project emissions for SF₆ where the emissions were incorrectly entered into the section table by a decimal place (LSPGC, 2021). In addition, amortized construction emissions were revised to reflect the expected (40-year) life of the Project as described in Chapter 2, *Project Description*.

The emissions that would be associated with the PG&E Interconnection Facilities portion of the Project have not been quantified; however, given its reduced area of disturbance and the reduced scope of construction activities compared to the Orchard Substation Facilities portion of the Project, it is assumed that the emissions associated with construction of the PG&E Interconnection Facilities would be less than those estimated for the Orchard Substation Facilities portion of the Project. For example, only 7 acres of land disturbance would occur during construction of the PG&E Interconnection Facilities, compared to 12 acres of land disturbance during construction of the Orchard Substation Facilities. Construction of the PG&E Interconnection Facilities would last approximately 18 months and would include trenching conductor/cable and telecommunication lines and installation of the above-ground interconnection facilities, while construction of the Orchard Substation Facilities would last approximate 22 months and would include development of the Orchard Substation, access roads, trenching for the below-ground conductor/cable and telecommunication lines, and construction of the stormwater detention basin.

Regarding long-term operation emissions, both the Orchard Substation Facilities and PG&E Interconnection Facilities portions of the Project would require the installation of two 500 kV circuit breakers. It is assumed that the circuit breakers for the PG&E interconnection would result in the same leaked emissions of SF₆ as estimated for the Orchard Substation circuit breakers. For the purposes of a conservative analysis of GHG emissions, it is assumed that the emissions associated with the PG&E Interconnection Facilities portion of the Project would be the same as or less than the emissions estimated for the Orchard Substation Facilities portion of the Project.

Direct and Indirect Effects

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment: *Less than Significant.***

Construction and Decommissioning Emissions

The Project’s construction activities would include site preparation and grading, installation of drainage and retention basins, foundations/supports, setting of equipment, installation of wiring and electrical systems, and assembly of the accessory components. The Orchard Substation site is approximately 20 acres and would require the grading of approximately 9 acres. The Orchard Substation Facilities portion of the Project would require the import of approximately 17,000 cubic yards suitable base material and the export of roughly 2,000 cubic yards of material. The Project schedule is to start grading and construction in March 2022, with completion in December 2023. Construction is assumed to occur 6 days per week. Material hauling/truck details along with worker trips and the anticipated construction equipment assumptions and durations were provided by the Project engineer. CalEEMod was used to model emissions for both the BAU (2004) and the Orchard Substation Facilities portion of the Project (2022–2023). Construction emissions were amortized over 40 years based on the projected operational life of the Project facilities.

As discussed above under the *Assumptions* heading, it is assumed that the PG&E Interconnection Facilities portion of the Project would result in the same or lesser amounts of emissions compared to the Orchard Substation Facilities portion of the Project. **Table 3.8-2, *Annual Project Business-as-Usual Construction GHG Emissions***, presents the construction GHG emissions under the BAU scenario. **Table 3.8-3, *Annual Project Construction GHG Emissions***, presents the construction GHG emissions under the Project scenario.

**TABLE 3.8-2
 ANNUAL PROJECT BUSINESS-AS-USUAL CONSTRUCTION GHG EMISSIONS**

Construction Year	CO ₂ e metric tons/year
2003	1,061.47
2004	332.97
Orchard Substation Subtotal	1,395.39
Orchard Substation Subtotal Annual, amortized over 40 years	34.88
PG&E Interconnection Subtotal Annual, amortized over 40 years	34.88
Total Project Annual, amortized over 40 years	69.76

SOURCES: Based on LSPGC 2021; see Appendix AIR.

**TABLE 3.8-3
 ANNUAL PROJECT CONSTRUCTION GHG EMISSIONS**

Construction Year	CO ₂ e metric tons/year
2022	892.87
2023	280.78
Orchard Substation Subtotal	1,173.66
Orchard Substation Subtotal Annual, amortized over 40 years	29.34
PG&E Interconnection Subtotal Annual, amortized over 40 years	29.34
Total Project Annual, amortized over 40 years	58.68

SOURCES: Based on LSPGC 2021; see Appendix AIR.

As shown in Tables 3.8-2 and 3.8-3, the annual amortized averages for BAU and Project construction emissions are 69.76 metric tons CO₂e per year and 58.68 metric tons CO₂e per year, respectively. The reductions are achieved primarily because current construction equipment and vehicles are more efficient than the average equipment and vehicles used in 2004. The eventual decommissioning of the Project would be expected to involve activities similar to those during construction; therefore, decommissioning would result in a reduction in GHG emissions relative to BAU emissions similar to that achieved during construction. APM GHG-1 is proposed to minimize GHG emissions associated with the Orchard Substation Facilities portion of the Project through low-cost emission reduction measures that are common for construction projects in California.

Operational Emissions

Emissions during operations would occur from vehicle visits to the Project sites associated with periodic O&M activities. CalEEMod was used to estimate annual operational emissions for both the 2004 BAU scenario and the Orchard Substation Facilities portion of the Project scenario, which would occur for the first year in 2023. Additionally, the Orchard Substation and PG&E Interconnection Facilities would each include installation and operation of two 500 kV gas insulated circuit breakers and switch gear, which would contain SF₆ used for insulation. Based on CARB’s 2010 regulations, the allowable SF₆ leak rate for circuit breakers was 10 percent in the year 2011. To be conservative, BAU (defined as year 2004) was assumed to have the same leakage rate allowed in 2011 under CARB’s regulations. CARB’s regulations also dictate that the maximum allowable SF₆ leak rate for year 2020 and beyond is 1 percent. Therefore, Project operations are assumed to achieve the currently required maximum leak rate of 1 percent. This comparison is considered conservative because SF₆ leak rates in 2004 could have been greater than 10 percent and the actual Project SF₆ leak rates may be less than the required 1 percent. **Table 3.8-4, Annual Project Business-as-Usual Operational GHG Emissions**, presents the Project’s GHG emissions under the BAU scenario. **Table 3.8-5, Annual Project Operational GHG Emissions**, presents the annual GHG emissions under the Project scenario.

**TABLE 3.8-4
 ANNUAL PROJECT BUSINESS-AS-USUAL OPERATIONAL GHG EMISSIONS**

Operational Source	CO₂e metric tons/year
Area	<0.01
Energy	30.70
Mobile	4.90
Waste	<0.01
Water	<0.01
SF ₆ Insulation Leaks	1,935
Orchard Substation Subtotal Operations	1,970.60
PG&E Interconnection Subtotal Operations	1,970.60
Total Project Operations	3,941.20

SOURCES: LSPGC 2021; see Appendix AIR.

**TABLE 3.8-5
 ANNUAL PROJECT OPERATIONAL GHG EMISSIONS**

Operational Source	CO₂e metric tons/year
Area	<0.01
Energy	16.04
Mobile	4.20
Waste	<0.01
Water	<0.01
SF ₆ Insulation Leaks	193.5
Orchard Substation Subtotal Operations	213.74
PG&E Interconnection Subtotal Operations	213.74
Total Project Operations	427.48

SOURCES: LSPGC 2021; see Appendix AIR.

Impact Conclusion

As shown in **Table 3.8-6**, the average annual GHG emissions, including amortized construction and operational emissions, under BAU and for the Project are 4,011 metric tons CO₂e per year and 486 metric tons CO₂e per year, respectively. This represents an approximately 88 percent reduction in Project emissions compared to the BAU scenario emissions, which is a greater reduction than the significance threshold of a 56 percent reduction. Therefore, Project-related GHG emissions would not be considered to have a significant impact on the environment, and the associated impact would be less than significant.

**TABLE 3.8-6
 ANNUAL BUSINESS-AS-USUAL AND PROJECT GHG EMISSIONS**

Operational Source	CO₂e metric tons/year
BAU Amortized Construction Emissions	69.76
BAU Operation Emissions	3,941.20
BAU Total Amortized Emissions	4,010.96
Project Amortized Construction Emissions	58.68
Project Operation Emissions	427.48
Project Total Amortized Emissions	486.16
Percent Reduction Project Under Business as Usual	88%
Percent Reduction Significance Threshold	56%
Significant Impact?	No

SOURCES: LSPGC 2021; see Appendix AIR.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases: *Less than Significant.*

In August 2008, SJVAPCD’s Governing Board adopted the CCAP. Based on that plan, SJVAPCD came up with processes to evaluate GHG significance. The plan covers projects that include BPS, which are more typical of residential or commercial type projects, as well as projects that do not implement BPS.

Projects not implementing BPS, such as the Project, would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to BAU, including GHG emission reductions achieved since the 2002–2004 baseline period. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to consistent with the CCAP.

Based on findings shown in Table 3.8-5, the Project would generate an 88 percent reduction in GHG emissions compared to BAU emissions. Therefore, GHG emissions would not conflict with the CCAP, and the impact would be less than significant under this criterion.

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3.9 Hazards and Hazardous Materials

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
IX. HAZARDS AND HAZARDOUS MATERIALS —				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

Materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable), corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). The term “hazardous material” is defined in California Health and Safety Code Section 25501(p) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

In some cases, past industrial or commercial uses on a site can result in spills or leaks of hazardous materials and petroleum products to the environment, thus resulting in soil and groundwater contamination. Federal and state laws require that soils having concentrations of contaminants such as lead, gasoline, or industrial solvents that are higher than certain acceptable levels must be handled and disposed as hazardous waste during excavation, transportation, and disposal. The California Code of Regulations, Title 22, Sections 66261.20–66261.24 contain

technical descriptions of characteristics that would cause soil to be classified as a hazardous waste.

Federal and state laws require that hazardous materials be specially managed. California regulations are compliant with federal regulations and in most cases, are more stringent. Regulations also govern the management of potentially hazardous building materials, such as asbestos-containing materials, lead-based paint, and polychlorinated biphenyls (PCBs) during demolition activities that could potentially disturb existing building materials.

Hazardous Materials Database Records Search

Mathis and Associates, Inc. was retained to conduct a Phase I Environmental Site Assessment (ESA) for the Project, in conformance with ASTM Practice E1527-13 Standard Practice for Environmental Site Assessments (Mathis & Associates 2020). The objective of the Phase I ESA is to determine the presence or absence of recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HREC), as defined in ASTM 1527-13. Several search methods were utilized in the process of the Phase I ESA, including regulatory file searches, historic use research, interviews, and on-site observations.

The Phase I included a hazardous materials database search, which includes a thorough review of environmental databases that are maintained by various federal, state, and local agencies to identify sites with releases of hazardous materials or just documented uses of hazardous materials. The findings of the assessment determined that there were no activities at the Project site or at neighboring properties that would indicate the significant potential for RECs. The report concluded that the assessment revealed no evidence of RECs, CRECs, or HRECs. According to the findings of the search, the Project Site was not listed on any of the databases reviewed.

Three sites were identified on the Fresno County Certified Unified Program Agency (CUPA)/Solid Waste Programs Resource Lists (FSW) database, listed as follows: PG&E Gates Substation & Maintenance Headquarters, Century Link Huron-CA03, and PG&E West Gates Solar System. The PG&E Gates Substation is listed as a hazardous waste generator, containing batteries and an above-ground storage tank (AST). The two remaining sites were identified as small hazardous materials handlers. None of the three sites have reported any issues of non-compliance according to the database and are not considered significant. The Phase I also identifies the Century Link Huron-CA03 as being an on-site auto repair facility. However, an independent review of the aerial photographs reveals that there is not an auto repair facility at this location.

An independent review of the Department of Toxic Substances Control (DTSC) EnviroStor and State Water Resources Control Board (SWRCB) GeoTracker hazardous materials databases confirms the findings of the database search included in the Phase I ESA; there are no active or closed hazardous materials sites within the Project Site boundary. The closest site to the Project Site is a closed (as of 10/2/1998) Leaking Underground Storage Tank site, referred to as Woolf Enterprises, at 17891 Gale in Huron, California. The Woolf Enterprises site is approximately 2 miles to the north of the Project site (DTSC, 2021; SWRCB, 2021).

Schools and Day Care Centers

There are no schools within 0.25 mile of the Project site. The nearest schools are Huron Migrant Head Start (approximately 3.4 miles northeast of the Project site) and Huron Middle School (approximately 3.6 miles northeast of the Project site).

Airports

There are no airports within 2 miles of the Project site. The nearest airports are the Stone Land Company Airport (approximately 7.5 miles east-southeast of the Project site) and the New Coalinga Municipal Airport (approximately 9 miles west-northwest of the Project site).

According to the Fresno County Airport Land Use Compatibility Plan, the Project site is not within any safety zone or noise contours (Fresno County ALUC, 2018).

Wildfire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) Forest Resource Assessment Program (FRAP) published maps that delineate Very High Fire Hazard Severity Zones (VHFHSZs) in State Responsibility Areas (SRAs) and Local Responsibility Areas (LRAs).

Based on mapping by CAL FIRE, the Project site is not within a VHFHSZ (CAL FIRE, 2007).

3.9.2 Regulatory Setting

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (USEPA), U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation. With respect to hazardous materials, state and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

Resource Conservation and Recovery Act

Under the Resource Conservation and Recovery Act (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by the USEPA. The USEPA approved California's RCRA program, referred to as the Hazardous Waste Control Law, in 1992.

Toxic Substance Control Act

The Toxic Substances Control Act of 1976 was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United

States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. The USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

Hazardous Materials Transportation

The U.S. Department of Transportation regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and California Department of Transportation (Caltrans). Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

Occupational Safety

OSHA is the agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in Title 29 of the Code of Federal Regulations (CFR), as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. At sites known or suspected to have soil or groundwater contamination, construction workers must receive training in hazardous materials operations and a site health and safety plan must be prepared. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Oil Pollution Prevention

Part 112 of Subchapter D of Chapter I of Title 40 of the Code of Federal Regulations (40 CFR 112) establishes procedures, methods, equipment, and other requirements to prevent discharges from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States. These regulations require facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan (40 CFR 112.1). The purpose of an SPCC Plan is to form a comprehensive federal/state spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility for which the SPCC Plan is written.

Emergency Planning & Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) from Superfund Amendments and Reauthorization Act (SARA) Title III improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for

facilities that store or manage specified chemicals. EPCRA applies to this program because the contractors that conduct cleanup, remove hazardous materials from the Project site, and construct remediation systems would be required to prepare and implement written emergency response plans to properly manage hazardous materials and respond to accidental spills.

State

The primary state agencies with responsibility for hazardous materials management in the region include the DTSC and the Regional Water Quality Control Board (RWQCB) within the California Environmental Protection Agency (Cal EPA), California Occupational Safety and Health Administration (Cal/OSHA), California Department of Public Health, CHP, and Caltrans. State laws, regulations, and responsible agencies are summarized in **Table 3.9-1**.

**TABLE 3.9-1
 STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Health and Safety Code Sections 25404 et seq)	In January 1996, Cal EPA adopted regulations, which implemented a Unified Program at the local level. The agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA), which for Fresno County is the Fresno County HazMat Compliance Program.
	California Fire Code, Title 24, Chapter 9 of the California Code of Regulations	The California Fire Code regulates the storage and handling of hazardous materials, including the requirement for secondary containment, separation of incompatible materials, and preparation of spill response procedures.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a Hazardous Materials Business Plan (HMBP) and submit it to the local CUPA, which in this case is the Fresno County HazMat Compliance Program.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
Hazardous Materials Transportation	Titles 13, 22, and 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in and passing through the state, including requirements for shipping, containers, and labeling.
	CHP and Caltrans	These two state agencies are primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.

TABLE 3.9-1 (CONTINUED)
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (Title 8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the <i>NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i> (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). See Chapter 3.2.7, <i>Geology and Soils</i> , for further description.
Underground Infrastructure	California Code of Regulations Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Emergency Services Act

Pursuant to the Emergency Services Act (California Code of Regulations Title 2, Chapter 7), California has developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the USEPA, CHP, California Department of Fish and Wildlife, the RWQCBs (in this case, the Central Valley RWQCB), the local air districts (in this case, the San Joaquin Valley Air Pollution Control District), and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Details below that relate to local regulations are provided for informational purposes.

3.9.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The Applicant proposes to implement the following applicant proposed measures (APMs) for hazards and hazardous materials as part of the Project:

- **APM HAZ-1:** A site-specific SPCCP¹ would be prepared prior to the initiation of construction. In the event of an accidental spill, the Project would be equipped with secondary containment that meets SPCCP Guidelines. The secondary containment would be sufficiently sized to accommodate accidental spills.
- **APM HAZ-2:** A HMMP² would be prepared and implemented for the Project. The plan would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan would include the following information related to hazardous materials and waste, as applicable:
 - A list of hazardous materials present on-site during construction and O&M to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements;
 - A Hazardous Materials Communication (i.e., HAZCOM) Plan;
 - Assignments and responsibilities of Project health and safety roles;
 - Standards for any secondary containment and countermeasures required for hazardous materials;
 - Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Project area, and disposal protocols; and
 - Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA trained individual and testing at a certified laboratory.

The Project would also be equipped with lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment would be constructed around and under the battery racks, and the HMMP would address containment from a battery leak.

¹ Spill Prevention, Control, and Countermeasure Plan (SPCCP).

² Hazardous Materials Management Plan (HMMP).

The plan would be provided to the CPUC prior to construction for recordkeeping. Plan updates would be made and submitted as needed if construction activities change whereas the existing plan does not adequately address the Project.

- **APM HAZ-3:** In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested, and if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.
- **APM HAZ-4:** LSPGC shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. Although the Project area is not located within an area designated as a Very High or High Fire Hazard Severity Zone, LSPGC will prepare a Construction Fire Prevention Plan prior to construction.

All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.

Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks, fire extinguishers, and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.

- **APM WQ-1:** Because the Project involves more than an acre of soil disturbance, a SWPPP [stormwater pollution prevention plan] would be prepared as required by the state NPDES [National Pollutant Discharge Elimination System] General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs [best management practices]. Implementation of the plan would help stabilize

disturbed areas and would reduce erosion and sedimentation. The SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:

- Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas;
- Strictly controlling vehicular traffic;
- Implementing a dust-control program during construction;
- Restricting access to sensitive areas;
- Using vehicle mats in wet areas; or
- Revegetating disturbed areas, where applicable, following construction.

In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.

- **APM WQ-2:** Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following:
 - Recovered groundwater would be contained on site and tested prior to discharge;
 - If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing);
 - Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains;
 - Water unsuitable for land application would be disposed of at an appropriately permitted facility; and
 - Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE, RWQCB, and/or CDFW, as applicable).
- **APM PS-1:** LSPGC would coordinate construction activities with local law enforcement and fire protection agencies. Emergency service providers would be notified of the timing, location, and duration of construction activities.
- **APM TRA-1:** LSPGC would prepare a Traffic Control Plan to describe measures to be taken to guide traffic (such as signs and workers directing traffic), safeguard construction workers,

provide safe passage, and minimize traffic impacts. LSPGC would follow its standard safety practices as needed, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LSPGC would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for obtaining a local encroachment permit, LSPGC would establish a Traffic Management Plan (TMP) to address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Construction activities would be coordinated with local law enforcement and fire protection agencies. Emergency service providers would be notified as required by the local permit of the timing, location, and duration of construction activities.

PG&E Construction Measures

PG&E would implement the following avoidance and minimization measures (AMMs) and BMPs for hazards and hazardous materials as part of the PG&E Interconnection Facilities construction and operation:

- **AMM-5:** Do not dump trash, bring firearms or pets, or have open fires such as barbecues on worksites.
- **AMM-6:** Do not refuel vehicles within 100 ft of a wetland or waterway unless a bermed and lined refueling area is constructed.
- **AMM-8:** During fire season in SRAs, carry backpack water sprayers and shovels in all vehicles; during red flag conditions curtail welding, carry a large fire extinguisher on each fuel truck, and clear parking and storage areas of flammable materials.
- **BMP-2: Generation of Spoil- Substation:** All spoils generated from within PG&E substations require sampling and shall only be disposed of PG&E approved landfills listed in ERTC Attachment Guide, Section 4, Part 1: ENV-4000P-01-JA15 'Job Aid- PG&E Authorized Disposal & Recycling Facilities'. Spoils from within substations are prohibited from give-away. Copies of all manifests are required to be submitted to the Environmental Lead/Project Environmental Field Specialist (EFS).
- **BMP-4: Asbestos:** If any loadbearing structure (poles, towers, concrete pads, etc.) is to be removed, this Project will require asbestos testing and notification to the local Air District or California Air Resources Board (CARB). Notify the Environmental Field Specialist (EFS) at least 45 calendar days prior to work commencing. The Air District must be notified at least 10 working days prior to work (demolition) commencing, some districts require 14 days. If the construction start date changes, notify the EFS immediately as notification to the Air District may need to be resubmitted. EFS is responsible for obtaining any necessary permits from the air district prior to start of work.
- **BMP-5: Combustion Sources:** If project or work involves the installation of a combustion source that may require a local air district permit, please work with the EFS and Air SME to evaluate compliance requirements. Combustion sources, depending on HP or MMBtu rating may require an Authority to Construct Permit prior to any installation activities and a Permit to Operate prior to operating.

Typical Combustion Sources that require permits are:

- Engines \leq 50 HP;
 - Boilers/Heaters that combust natural gas; and
 - Flares.
- **BMP-8: Hazardous Materials Business Plan:** The Environmental Field Specialist (EFS) shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are: 200 cubic feet of compressed gases (1000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 pounds of solids, or 55 gallons of liquids for more than 30 non-consecutive days. The following jurisdictions require notification for any amount of hazardous material/waste:

Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only) Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details).

NOTE: The Project EFS will develop an HMBP if it is required.

- **BMP-9: Hazardous Waste Management Hazardous Materials Storage:** This project may involve the storage of hazardous materials and they must be managed according to regulations and best management practices.
 - All releases of hazardous materials must be immediately addressed. Maintain a spill kit onsite during the length of the project. Contact the project EFS for spills of hazardous materials/wastes to determine if agency notifications will be required and/or if additional resources are needed.
 - Hazardous materials, greater than 440 lbs and less than 1001 lbs can be transported on PG&E vehicles if the proper MOT shipping paper/MSDS accompanies the load. Contact the project EFS for additional guidance in these areas.
 - All hazardous materials containers must be marked correctly.
 - All hazardous materials signs must be displayed as required.
 - Non saturated oily rags (to be laundered) stored in non-combustible containers.
 - Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. on-site.
 - Hazardous material containers must be in good condition.
 - All hazardous materials must be compatible with containers.
 - Hazardous materials containers are kept closed.
 - If there is an unauthorized release of hazardous material, contact your Environmental Field Specialist immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043.

Local EFS Notification

- Immediately contact the local EFS and stop work if any of the following conditions occur. After hours or if the local EFS is unavailable, please call the Environmental Hotline at 800-874-4043.

- Discharge or spill of hazardous substance.
 - If an Environmental Regulator visits the site;
 - Visually cloudy/muddy water is observed leaving the work area;
 - An underground storage tank is discovered; or
 - A subsurface component related to site remediation activities (e.g., monitoring well, recovery well, injection well) is discovered. No subsurface components may be impacted.
- If during excavation unanticipated evidence of contamination is identified (e.g., staining, odors), work must cease and when safe to do so, cover the trench with steel plates. In order to minimize impacts to public safety and the environment, place contaminated soil on a polyethylene sheet (4 ml) and cover or place the contaminated soil in lined covered containers. Then contact your local/support EFS to determine the next steps.
- If any subsurface components related to site remediation activities (e.g., monitoring well, recovery well, injection well) are discovered in the path of excavation, work must cease in that location and your EFS must be notified to determine the next steps. No subsurface components may be impacted
- **BMP-10: Sulfur Hexafluoride (SF₆) Gas Material/Waste Management.** Before accessing any equipment that may contain SF₆ gas byproduct waste, contact your local Environmental Field Specialist (EFS) at least two weeks in advance for assistance in arranging cleanup, transportation and disposal. PSC will retrieve, package, label and transport SF₆ byproducts. All SF₆ waste that is removed from a Substation must have proper shipping papers which could include a remote waste shipping paper or a manifest (manifests require a temporary EPA ID number).
 - Substation personnel shall contact PSC to retrieve, package, label, and transport SF₆ byproduct waste (i.e. fluorides of sulfur, metallic fluorides, etc.). All SF₆ byproduct waste that is removed must have proper shipping papers, which could include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA ID number).
 - SF₆ cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001.

Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF₆ in all facilities. ASG provides 24-hour service in response to events involving SF₆ as well as delivery and removal of all SF₆ cylinders. Contact information: <https://www.advancedspecialtygases.com>.

- **BMP-11: SPCC:** The local/support EFS shall be notified 30 days prior to an SPCC triggering event occurs (modification to existing or new storage of >1,320 gallons of oil in containers >55 gallons). If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by an engineer. The SPCC containment must be installed prior to moving onsite of quantities requiring containment. The PM number must remain open until the local/support EFS notifies you that the plan is certified by an engineer, and any necessary modifications are complete.

- **BMP-12: Treated Wood:** All new and used treated wood poles shall be managed in accordance with ENV-3000P-07 and stored on horizontal non-treated wood, concrete, or metal support beams raised off the ground to prevent decay and damage. As with any hazardous material, store treated wood away from storm drains.
- **BMP-13: Treated Wood Waste:** All treated wood waste and debris (e.g., poles, cross-arms, saw dust, chips, etc.) shall be transported to the local PG&E or PG&E Contractor approved collection point and placed in designated bins. No poles may be left in place, unless formal authorization is obtained from applicable State and/or Federal agencies or a liability waiver is signed. Please refer to Job Aid ENV-4000P-07.

3.9.4 Environmental Impacts and Mitigation Measures

Methodology and Assumptions

The following impact analysis considers the potential impacts related to hazards and hazardous materials associated with the construction, operation, and maintenance of the Project. Impacts related to hazards and hazardous materials would be considered significant if they resulted in releases of hazardous materials, proximity to schools or airports, interference with emergency access, or wildland fires. The Project would be regulated by the various laws, regulations, and policies summarized above in Regulatory Setting. Compliance by the Project with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

Direct and Indirect Effects

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials: *Less than Significant.*

Construction of the Project would require the limited use of hazardous materials, such as fuels, oils and lubricants, paints and thinners, and cleaning solvents. Additionally, the Project would include transformers containing mineral oil, which is considered a hazardous material in the state of California. Additional hazardous wastes that could be encountered during construction include contaminated soils, incidental spill waste, and concrete washout. Herbicides and/or pesticides are not proposed for use during construction.

In accordance with APM HAZ-1, APM HAZ-2, BMP-8, and BMP-11, an SPCCP and HMMP would be prepared prior to the beginning of construction. The plans would be prepared in accordance with relevant state and federal guidelines and regulations (i.e., Health and Safety Code and California Code of Regulations). All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Safety Data Sheets (SDS) would be made available at the construction site for all crew workers. Based on the anticipated volume of hazardous liquid materials, such as fuel, that would be stored and dispensed at the Project staging area, an SPCCP would be required (in accordance with applicable provisions of 40 CFR 112.1–112.7, as well as APM HAZ-1). Although not expected, if pre-existing hazardous waste is encountered on the Project site, it would be removed and disposed of in a manner consistent with

all state and federal regulations, in accordance with APM HAZ-2, BMP-2, BMP-4, BMP-10, BMP-12, and BMP-13.

The HMMP would include protocols to follow to ensure that wastes generated or encountered would be handled, contained, and disposed of according to local, state, and federal regulations. In addition, the HMMP would describe hazardous materials use, transport, storage, management, and disposal protocols. This could include containment and transport in Department of Transportation–approved vessels, use of secondary containment, and training of material handlers to ensure worker safety and the reduction of cross contamination. Project construction activity would be subject to the Construction General Permit and its required SWPPP, which include BMPs to control hazardous materials used for construction (which is included in the details of APM WQ-1).

Construction waste that cannot be recycled would ultimately be disposed of at the Avenal Regional Landfill or another approved facility. Construction waste would be disposed of properly and in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste including, but not limited to, the California Integrated Waste Management Act of 1989, which has set reduction rates for solid waste sent to landfills.

Operation and maintenance of the Project would result in the transportation, storage, use or disposal of fewer hazardous materials than during construction. During operation, relatively limited quantities of hazardous materials would be stored onsite in accordance with regulatory requirements and the HMBP. Compliance with applicable federal, state, and local regulations and the applicable BMPs and HMBP would ensure that any potential impact would be less than significant during Project operation and maintenance.

Implementation of APM HAZ-1, APM HAZ-2, APM WQ-1, BMP-2, BMP-4, BMP-8, BMP-10, BMP-11, BMP-12, and BMP-13 would reduce impacts related to transport, use, and disposal of hazardous materials. Additionally, compliance with applicable federal, state, and local requirements, and related BMPs and plans would ensure that the Project does not create a significant hazard to the public through the routine transport, use, or disposal of hazardous materials. Therefore, this impact would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment: *Less than Significant.*

During all Project phases, activities may involve the transportation, storage, use, or disposal of a variety of hazardous materials, including batteries, hydraulic fluid, diesel fuel, gasoline, grease, lubricants, paints, solvents, and adhesives.

The SPCCP and HMMP (required by APM HAZ-1, AMP HAZ-2, BMP-8, and BMP-11) would include BMPs for these activities as well as spill control and spill response measures. In the unlikely event of a spill, the SPCCP would include appropriate measures to ensure that workers would cease work activities to contain any release and enact the protocols for cleanup, including

the notification of appropriate agencies and the use of materials stored onsite such as absorbent pads to minimize the spread or exposure.

Accidents or mechanical failure involving heavy equipment could result in the accidental release of fuel, lubricants, hydraulic fluid, or other hazardous substances. These types of spills on construction sites are typically in small quantities, localized, and cleaned up in a timely manner. Construction contractors are contractually responsible for their hazardous materials and are required under their contract to properly store and dispose of these materials in compliance with state and federal laws, including implementing a SPCCP and HMMP. As discussed, the Project would require coverage under the Construction General Permit (also a requirement of APM WQ-1), and thus would be subject to the protections included in a SWPPP, which would outline BMPs to contain a potential release and to prevent any such release from reaching an adjacent waterway or stormwater collection system (e.g., erosion control, sediment control, and waste management). Therefore, implementation of the SWPPP would minimize potential adverse effects to the environment.

Implementation of APM HAZ-1, APM HAZ-2, APM WQ-1, BMP-2, BMP-4, BMP-8, BMP-9, BMP-10, BMP-11, BMP-12, and BMP-13 would ensure compliance with applicable federal, state, and local regulations and the applicable BMPs, SPCCCP, and HMMP; compliance would ensure that the Project would not result in significant hazards to the public or environment related to accidental release of hazardous materials. Impacts involving accidental release of hazardous materials would 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: *No Impact.*

The Project site is not located within 0.25 mile of a school. The nearest schools are Huron Migrant Head Start (approximately 3.4 miles northeast of the Project site) and Huron Middle School (approximately 3.6 miles northeast of the Project site). The Project would not emit hazardous emissions or handle hazardous materials within 0.25 mile of a school; there would be no impact.

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: *No Impact.*

The Phase I ESA performed by Mathis & Associates indicated that the Project site is not included on list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List), nor is it near any such site. An independent review of the EnviroStor and GeoTracker hazardous materials databases confirms that the Project site is not included in those databases and there are no active or closed hazardous materials sites within the Project site boundary. The nearest hazardous materials site is a closed Leaking Underground Storage Tank site, approximately 2 miles north of the Project site. There would be no impact under this criterion.

- 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, result in a safety hazard or excessive noise for people residing or working in the project area: *No Impact*.**

The Project site is not located within 2 miles of a public or public use airport. The nearest airports are the Stone Land Company Airport (approximately 7.5 miles east-southeast of the Project site) and the New Coalinga Municipal Airport (approximately 9 miles west-northwest of the Project site). The Project would not result in a safety hazard or excessive noise for people residing or working in the area; there would be no impact.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan: *Less than Significant*.**

No specific evacuation routes are delineated in the Fresno County Multi-Jurisdictional Hazard Mitigation Plan (Fresno County, 2018), Master Emergency Services Plan (Fresno County, 2017), or Fresno County General Plan (Fresno County, 2000). Evacuation routes would be identified and coordinated by local law enforcement and emergency service responders as needed during an emergency situation.

The Project site is bordered to the south by West Jayne Avenue, which connects State Route (SR) 269 (South Lassen Avenue) and Interstate 5 (I-5). I-5 is approximately 1 mile east of the Project site. Because there are several other pathways to I-5 and there are no residences or businesses near the Project site, Project activities are unlikely to interfere or impair evacuation procedures during an emergency. Additionally, no road closures are planned as part of the Project, nor is any work planned on the surrounding public roadways.

Nonetheless, these roads are public ground transportation routes, and Project construction could affect the traffic in these areas by adding congestion to the roads or reducing the capacity of a given roadway. To ensure that the Project would not affect nearby roadways during construction, implementation of APM PS-1 and APM TRA-1 would be required. APM PS-1 would require coordination with local law enforcement and fire protection agencies, and notification of emergency service providers regarding construction activities. APM TRA-1 would require the preparation of a Traffic Control Plan and Traffic Management Plan, which would include protocols for minimizing traffic impacts and would address haul routes, potential closures, etc., all to be coordinated with law enforcement and emergency service providers.

Proper implementation of APM PS-1 and APM TRA-1 during Project activities would reduce any impacts related to impairment or interference with emergency response or evacuations plans. The impact would 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: *Less than Significant*.**

Based on mapping by CAL FIRE, the Project site is not within a Very High Fire Hazard Severity Zone; the Project site is mapped within an unzoned Local Responsibility Area (LRA).

The use of construction equipment and the possible temporary on-site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction.

To reduce any potential fire hazards during construction, a Project-specific Construction Fire Prevention Plan (CFPP) would be prepared pursuant to APM HAZ-4, which includes minimization and response measures to help reduce the risk of igniting a fire and to establish protocols for suppressing a fire. To further reduce the potential impacts related to wildfire, the Project would include required compliance with AMM-5, AMM-6, AMM-8, BMP-5, and BMP-9, which all include specific fire prevention and suppression measures.

During construction activities that are considered “hot work” (e.g., welding, grinding, or any other activity that creates hot sparks), the Applicant would implement a 10-foot buffer around that activity, and vegetation would be cleared to ensure sparks do not create a fire hazard. For activities that would not produce sparks but would still have potential to produce a fire hazard such as ground rod or ground wire installation, LSPGC would implement a 5-foot buffer to be cleared of vegetation, and additional details (i.e., handling sparks) would be provided in the CFPP described above.

Under Section 35 of General Order 95, the CPUC regulates all aspects of design, construction, and O&M of electrical power lines and fire safety hazards for utilities subject to their jurisdiction (CPUC, 2012). In addition, the Fire Prevention Standards for Electric Utilities (California Code of Regulations Title 14, Sections 1250–1258) provide definitions, maps, specifications, and clearance standards for projects under the jurisdiction of California Public Resources Code Sections 4292 and 4293 in SRAs. The Applicant would create a fire break around the STATCOM substation in accordance with all applicable state and federal regulations.

Implementation of APM HAZ-4, AMM-5, AMM-6, AMM-8, BMP-5, and BMP-9 would include the preparation and implementation of a CFPP, as well as Project compliance with the various fire safety regulations and hazardous materials storage requirements. Implementation of these measures would minimize the potential for fire creation, and ensure that the impacts related to risk of wildland fires during construction would be less than significant.

3.9.5 References

California Department of Forestry and Fire Protection (CAL FIRE), 2007. Draft Fire Hazard Severity Zones in LRA, Fresno County. Fire and Resource Assessment Program. October 2, 2007. Map. Scale 1:250,000.

California Department of Toxic Substances Control (DTSC), 2021. EnviroStor database. Sites near Huron, CA.

Fresno County, 2017. Fresno County Operational Area Master Emergency Services Plan. October 31, 2017.

Fresno County, 2018. Fresno County Multi-Jurisdictional Hazard Mitigation Plan. May 2018.

Fresno County, 2000. Fresno County General Plan. Background Report. Adopted October 3, 2000.

Fresno County Airport Land Use Commission (ALUC), 2018. Fresno County Airport Land Use Compatibility Plan. December 2018.

Mathis and Associates, Inc. (Mathis & Associates), 2020. Phase I Environmental Site Assessment. Gates North, APN 075-060-45SU, APN 075-060-18SU, and APN 075-060-67S, Huron, California. March 2020.

State Water Resources Control Board (SWRCB), 2021. GeoTracker database. Sites near Huron, CA.



3.10 Hydrology and Water Quality

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
X. HYDROLOGY AND WATER QUALITY —				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

As described in Chapter 2, *Project Description*, the Project consists of two major components: the Orchard Substation Facilities and the PG&E Interconnection Facilities. The term “Project” or “Project site” in this section is inclusive of both components. Where necessary, the components are discussed individually as the Orchard Substation Facilities or the PG&E Interconnection Facilities.

The Project site is located in the San Joaquin Valley, bounded by the Sacramento–San Joaquin Delta to the north, the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Diablo Range (part of the Coast Ranges) to the west (USGS 2021). The Project site is within the Tulare Lake Hydrologic Region, which encompasses Kings, Tulare, Fresno, and Kern counties and is internally drained by the Kings, Kaweah, Tule, and Kern rivers (DWR 2006). Average annual precipitation in the Project vicinity is 8 inches and generally falls in the months between October and May (WRCC 2021).

The site is located in the Great Valley Geomorphic Province of California. The Great Valley is characterized mainly by sedimentary strata emanating from the bounding Sierra Nevada and Coast mountain ranges. Surface geology at the site is characterized as Quaternary Alluvium, consisting of alluvial gravel, sand, and clay of the valley areas (Terracon, 2019).

Surface Water Hydrology

The Project site is located in the California Region hydrologic unit, Arroyo Vadoso subwatershed, which has a drainage area of 28,623 acres. The site is at an elevation of approximately 400 feet above mean sea level. The topography of the site is generally flat.

There are no surface streams in the immediate vicinity of the Project site. Natural drainages in the surrounding vicinity include the intermittent Arroyo Vadoso, approximately 2.5 miles south of the site; perennial Zapato Chino Creek (west of Interstate 5) approximately 3 miles to the west; and Los Gatos Creek, an ephemeral waterway 3.5 miles north of the site. The man-made California Aqueduct is 4 miles east of the Project site.

Los Gatos Creek (segment of 49 miles within Fresno County) is listed as impaired¹ for pollutants including lead and selenium, with sources unknown (RWQCB, 2018).

Groundwater

The Project site is within the Westside Subbasin of the San Joaquin Valley Groundwater Basin. The Westside Subbasin includes approximately 1,000 square miles of Fresno and Kern counties and consists primarily of Quaternary and Tertiary-age unconsolidated sediments (WWD, 2020). The upper and lower water-bearing zones of the subbasin are recharged by natural surface water, applied agriculture irrigation water, and subsurface inflow. The primary sources of recharge are infiltration of surface water from streams located along the eastern front of the Coast Ranges and deep percolation of agricultural irrigation water. Municipal and irrigation groundwater well yields within the Westside Subbasin average 1,100 gallons per minute (gpm) and range from 560 gpm to 2,000 gpm (DWR 2016).

The Westside Subbasin is one of 21 basins that have been identified as being in a state of critical overdraft (DWR 2016), and the Westside Subbasin is listed as a high-priority basin (DWR 2020). Westlands Water District (WWD), in its role as the groundwater sustainability agency for the Westside Subbasin, prepared and adopted a groundwater sustainability plan (GSP).

Flood Potential

The Federal Emergency Management Agency (FEMA) is responsible for mapping areas subject to flooding during a 100-year flood event (i.e., 1 percent chance of occurring in a given year).

¹ Final 2014 and 2016 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report). Category 5 criteria: A water segment where standards are not met and a TMDL is required, but not yet completed for at least one of the pollutants being listed for this segment.

According to the FEMA Flood Insurance Rate Map, the Project site does not lie within a 100-year flood zone or any other special flood hazard zone (FEMA 2009).

3.10.2 Regulatory Setting

Federal

The statutes governing the construction and operational/maintenance activities related to the Project that could affect water quality are the federal Clean Water Act (CWA) (U.S. Code Title 33, Section 1251) and the state Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (California Water Code Section 13000 et seq.).

The California Legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB) and its nine regional water quality control boards (RWQCBs). The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The study area is located in the Central Valley RWQCB, Region 5. The *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan)* designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (Water Code Sections 13240–13247).

Clean Water Act

The CWA, enacted by Congress in 1972 and amended several times since its inception, is the primary federal law regulating water quality in the United States and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA authorizes the U.S. Environmental Protection Agency (USEPA) to implement federal water pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the CWA is administered by the USEPA and U.S. Army Corps of Engineers (USACE). At the state and regional levels, the act is administered and enforced by the SWRCB and the nine RWQCBs. The relevant sections of the CWA are summarized below.

CWA Section 402: National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402 of the CWA is one of the primary mechanisms for controlling water pollution through the regulation of sources that discharge pollutants into waters of the United States. USEPA has delegated authority of issuing NPDES permits in California to the SWRCB, which has nine RWQCBs. The NPDES permit program is discussed in detail below in the *State* section.

Federal Emergency Management Agency

Under Executive Order 11988, FEMA is responsible for management of floodplain areas, defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a 1 percent or greater chance of flooding in any given year (the 100-year floodplain). FEMA is a federal agency whose overall mission is to support citizens and first responders to ensure that the United States builds, sustains, and improves capabilities to prepare for, protect against, respond to, recover from, and mitigate all hazards. With regard to flooding, FEMA provides information, guidance, and regulation associated with flood prevention, mitigation, and response. Under Executive Order 11988, FEMA requires that local governments covered by the federal flood insurance program pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain. Through its Flood Insurance and Mitigation Administration, FEMA manages the National Flood Insurance Program, which includes flood insurance, floodplain management, and flood hazard mapping functions. FEMA determines flood elevations and floodplain boundaries and distributes the flood insurance rate maps used in the National Flood Insurance Program. These maps identify the locations of special flood hazard areas, including 100-year floodplains (i.e., areas that would have a 1 percent annual chance of flooding).

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations. Those regulations enable FEMA to require municipalities participating in the National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains. The Project is not located in a floodway or in an identified flood hazard area (FEMA 2009).

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (Division 7 of the California Water Code) provides for protection of the quality of waters of the State of California for use and enjoyment by the people of California. The act also establishes provisions for a statewide program for the control of water quality, recognizing that waters of the state are increasingly influenced by inter-basin water development projects and other statewide considerations, and that factors such as precipitation, topography, population, recreation, agriculture, industry, and economic development vary regionally within the state. The statewide program for water quality control is therefore administered most effectively on a local level with statewide oversight. Within this framework, the act establishes the authority of the SWRCB and the nine RWQCBs. The SWRCB administers water rights, sets state policy for water pollution control, and implements various water quality functions throughout the state, while the RWQCBs conduct planning, permitting, and most enforcement activities.

The Project is proposed in a location under the jurisdiction of the Central Valley RWQCB. The Central Valley RWQCB prepares and periodically updates the Basin Plan. Pursuant to the CWA NPDES program, the Porter-Cologne Act also delegates the authority to the RWQCBs to issue NPDES permits.

Water Quality Control Plan—Tulare Lake Basin

The Project site is located within the jurisdiction of the Central Valley RWQCB (Region 5). Region 5 is tasked with implementing the adopted water quality control plan (Basin Plan) for the Tulare Lake Basin through planning, permitting, and enforcement of established water quality objectives. In accordance with the State Policy for Water Quality Control, Region 5 employs a range of beneficial use designations for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives, discharge conditions, and prohibitions (Table 3.10-1). The Basin Plan for the Tulare Lake Basin has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdictional planning area. The existing beneficial uses designated in the Basin Plan for surface and groundwater in the study area, defined as the area of influence within the Westside Groundwater Basin, include agricultural, industrial process water, and municipal uses. Multiple other beneficial uses are designated for water bodies in the surrounding area, as shown in Table 3.10-1 (RWQCB, 2018).

**TABLE 3.10-1
 DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE STUDY AREA**

Water Body	Designated Beneficial Uses
Valley Floor Waters	AGR, IND, PRO, REC-1, REC-2. WARM, RARE. GWR
Pleasant Valley and Westside Groundwater Basins	MUN, AGR, IND

NOTES:

Existing and Potential Beneficial Uses Key:

MUN (Municipal and Domestic Supply); AGR (Agricultural Supply); IND (Industrial Service Supply); PRO (Industrial Process Supply); REC-1 (Body Contact Recreation); REC-2 (Noncontact Recreation); WARM (Warm Freshwater Habitat); RARE (Rare Threatened and Endangered Species); COLD (Cold Freshwater Habitat); WILD (Wildlife Habitat); GWR (Groundwater Recharge).

SOURCE: RWQCB, 2018

NPDES General Permit for Discharges of Stormwater Associated with Construction Activities (Order 2009-0009-DWQ)

The NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ), commonly referred to as the Construction General Permit, is required for projects that would result in disturbance of 1 or more acres of soil during construction. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. Because the Project would result in the disturbance of 1 or more acres of soil, it would be subject to the Construction General Permit.

The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and other pollutants from contacting stormwater and from moving off-site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface

water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program and a chemical monitoring program for non-visible pollutants.

One or more SWPPPs would be required for the Project's construction² and at a minimum, would include:

- Description of construction materials, practices, and equipment storage maintenance;
- List of pollutants likely to contact stormwater and site-specific erosion and sedimentation control practices;
- List of provisions to eliminate or reduce discharge of materials to stormwater;
- BMPs for fuel and equipment storage;
- Non-stormwater management measures, such as installing specific discharge controls during activities such as paving operations and vehicle and equipment washing and fueling; and
- Commitment that equipment, materials, and workers would be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs would be performed as soon as possible, depending upon worker safety.

The SWPPP provides specific construction-related BMPs to prevent soil erosion and loss of topsoil. BMPs implemented could include, but would not be limited to: physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion or sedimentation from occurring during construction. Post-construction requirements necessitate that construction sites be restored to pre-project hydrological conditions to ensure that the physical and biological integrity of aquatic ecosystems are sustained in their existing condition.

In addition to stormwater discharges, the Construction General Permit covers other non-stormwater discharges including irrigation of vegetative erosion control measures, water to control dust, uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by the RWQCB. The discharge of non-stormwater is authorized under the following conditions:

- The discharge does not cause or contribute to a violation of any water quality standard;
- The discharge does not violate any other provision of the General Permit;
- The discharge is not prohibited by the applicable basin plan;

² The Gates project and the PG&E portion of the project (technically separate although analyzed together) may require separate SWPPPs for their construction. The future decommissioning of the facility would also require a SWPPP.

- The discharger has included and implemented specific BMPs required by the General Permit to prevent or reduce the contact of the non-stormwater discharge with construction materials or equipment;
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
- The discharge is monitored and meets the applicable numeric action levels; and
- The discharger reports the sampling information in the SWPPP Annual Report.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (Water Code Section 10723) provides a framework for sustainable management of groundwater resources. In groundwater basins designated by DWR as medium and high priority, local public agencies and locally controlled groundwater sustainability agencies are required to develop and implement GSPs or alternatives to GSPs. Each GSP or alternative must include measurable objectives and interim milestones for achieving sustainability goals for the given groundwater basin. Plans must also include a physical description of the basin, including information on groundwater levels, groundwater quality, subsidence and groundwater/surface water interaction, historical and projected water demand and supply data, monitoring and management provisions, and a description of how the plan will affect other plans.

The Project would be located in the Westside Subbasin of the Tulare Lake groundwater basin, which is a high-priority groundwater basin (DWR 2020). The Westside Subbasin has been identified by DWR as being in conditions of critical overdraft (DWR 2016).

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Details below that relate to local regulations are provided for informational purposes.

Fresno County 2000 General Plan

The following policies identified in the Open Space and Conservation Element of the Fresno County General Plan (Fresno County 2000) are relevant to the Project:

Policy OS-A.13: The County shall encourage, where economically, environmentally, and technically feasible, efforts aimed at directly or indirectly recharging the county's groundwater.

Policy OS-A.19: The County shall require the protection of floodplain lands and, where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access, and recreation.

Policy OS-A.23: The County shall protect groundwater resources from contamination and overdraft by pursuing the following efforts:

- a. Identifying and controlling sources of potential contamination;
- b. Protecting important groundwater recharge areas;
- c. Encouraging water conservation efforts and supporting the use of surface water for urban and agricultural uses wherever feasible;
- d. Encouraging the use of treated wastewater for groundwater recharge and other purposes (e.g., irrigation, landscaping, commercial, and non-domestic uses);
- e. Supporting consumptive use where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area;
- f. Considering areas where recharge potential is determined to be high for designation as open space; and
- g. Developing conjunctive use of surface and groundwater.

Policy OS-A.25: The County shall minimize sedimentation and erosion through control of grading, cutting of trees, removal of vegetation, placement of roads and bridges, and use of off-road vehicles. The County shall discourage grading activities during the rainy season unless adequately mitigated to avoid sedimentation of creeks and damage to riparian habitat.

Policy OS-A.26: The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff.

Policy OS-A.27: The County shall monitor water quality regularly and take necessary measures to prevent contamination, including the prevention of hazardous materials from entering the wastewater system.

Policy OS-D.3: The County shall require development to be designed in such a manner that pollutants and siltation do not significantly degrade the area, value, or function of wetlands. The County shall require new developments to implement the use of Best Management Practices (BMPs) to aid in this effort.

3.10.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following applicant proposed measures (APMs) have been identified by the Applicant and would be included as part of the Orchard Substation Facilities portion of the Project to reduce potential impacts on hydrology and water quality (LSPGC 2020). These APMs pertain to regulatory requirements of the Construction General Permit (and associated SWPPP), and other discharge considerations. In addition, APMs pertaining to spill prevention and hazardous materials management have been included and would be implemented during construction, operation, and maintenance of the Orchard Substation Facilities to protect water quality.

- **APM WQ-1:** Because the Project involves more than an acre of soil disturbance, a SWPPP would be prepared as required by the state NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs. Implementation of the plan would help stabilize disturbed areas and would reduce erosion and sedimentation. The SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:

- Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas;
- Strictly controlling vehicular traffic;
- Implementing a dust-control program during construction;
- Restricting access to sensitive areas;
- Using vehicle mats in wet areas; or
- Revegetating disturbed areas, where applicable, following construction.

In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.

- **APM WQ-2:** Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following:
 - Recovered groundwater would be contained on site and tested prior to discharge;
 - If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing);
 - Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains;
 - Water unsuitable for land application would be disposed of at an appropriately permitted facility; and

Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE, RWQCB, and/or CDFW, as applicable).

- **APM HAZ-1:** A site-specific SPCCP [Spill Prevention, Control, and Countermeasure Plan] would be prepared prior to the initiation of construction. In the event of an accidental spill,

the Project would be equipped with secondary containment that meets SPCCP Guidelines. The secondary containment would be sufficiently sized to accommodate accidental spills.

- **APM HAZ-2:** A HMMP [Hazardous Materials Management Plan] would be prepared and implemented for the Project. The plan would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan would include the following information related to hazardous materials and waste, as applicable:
 - A list of hazardous materials present on-site during construction and O&M to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements;
 - A Hazardous Materials Communication (i.e., HAZCOM) Plan;
 - Assignments and responsibilities of Proposed Project health and safety roles;
 - Standards for any secondary containment and countermeasures required for hazardous materials;
 - Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Proposed Project area, and disposal protocols; and
 - Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA trained individual and testing at a certified laboratory.

The Project would also be equipped with lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment would be constructed around and under the battery racks, and the HMMP would address containment from a battery leak.

The plan would be provided to the CPUC prior to construction for recordkeeping. Plan updates would be made and submitted as needed if construction activities change whereas the existing plan does not adequately address the Project.

PG&E Construction Measures

PG&E would implement the following avoidance and minimization measures (AMMs) and BMPs to address impacts related to hydrology and water quality for the PG&E Interconnection Facilities construction and operation:

- **AMM-2:** Park vehicles and equipment on pavement, roads, or previously disturbed areas.
- **AMM-3:** Minimize or avoid new disturbance to the extent practicable.
- **AMM-6:** Do not refuel vehicles within 100 ft of a wetland or waterway unless a bermed and lined refueling area is constructed.
- **AMM-9:** Implement erosion control measures where necessary to reduce erosion and sedimentation in wetlands or waterways.

- **BMP-2: Generation of Spoil- Substation:** All spoils generated from within PG&E substations require sampling and shall only be disposed of PG&E approved landfills listed in ERTC Attachment Guide, Section 4, Part 1: ENV-4000P-01-JA15 'Job Aid- PG&E Authorized Disposal & Recycling Facilities'. Spoils from within substations are prohibited from give-away. Copies of all manifests are required to be submitted to the Environmental Lead/Project Environmental Field Specialist (EFS).
- **BMP-8: Hazardous Materials Business Plan:** The Environmental Field Specialist (EFS) shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are: 200 cubic feet of compressed gases (1000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 pounds of solids, or 55 gallons of liquids for more than 30 non-consecutive days. The following jurisdictions require notification for any amount of hazardous material/waste:

Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only) Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details).

NOTE: The Project EFS will develop an HMBP if it is required.

- **BMP-9: Hazardous Waste Management Hazardous Materials Storage:** This project may involve the storage of hazardous materials and they must be managed according to regulations and best management practices.
 - All releases of hazardous materials must be immediately addressed. Maintain a spill kit onsite during the length of the project. Contact the project EFS for spills of hazardous materials/wastes to determine if agency notifications will be required and/or if additional resources are needed.
 - Hazardous materials, greater than 440 lbs and less than 1001 lbs can be transported on PG&E vehicles if the proper MOT shipping paper/MSDS accompanies the load. Contact the project EFS for additional guidance in these areas.
 - All hazardous materials containers must be marked correctly.
 - All hazardous materials signs must be displayed as required.
 - Non saturated oily rags (to be laundered) stored in non-combustible containers.
 - Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. on-site.
 - Hazardous material containers must be in good condition.
 - All hazardous materials must be compatible with containers.
 - Hazardous materials containers are kept closed.
 - If there is an unauthorized release of hazardous material, contact your Environmental Field Specialist immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043.

Local EFS Notification

- Immediately contact the local EFS and stop work if any of the following conditions occur. After hours or if the local EFS is unavailable, please call the Environmental Hotline at 800-874-4043.
- Discharge or spill of hazardous substance.
 - If an Environmental Regulator visits the site;
 - Visually cloudy/muddy water is observed leaving the work area;
 - An underground storage tank is discovered; or
 - A subsurface component related to site remediation activities (e.g., monitoring well, recovery well, injection well) is discovered. No subsurface components may be impacted.
- If during excavation unanticipated evidence of contamination is identified (e.g., staining, odors), work must cease and when safe to do so, cover the trench with steel plates. In order to minimize impacts to public safety and the environment, place contaminated soil on a polyethylene sheet (4 ml) and cover or place the contaminated soil in lined covered containers. Then contact your local/support EFS to determine the next steps.

If any subsurface components related to site remediation activities (e.g., monitoring well, recovery well, injection well) are discovered in the path of excavation, work must cease in that location and your EFS must be notified to determine the next steps. No subsurface components may be impacted.

- **BMP-11: SPCC:** The local/support EFS shall be notified 30 days prior to an SPCC triggering event occurs (modification to existing or new storage of >1,320 gallons of oil in containers >55 gallons). If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by an engineer. The SPCC containment must be installed prior to moving onsite of quantities requiring containment. The PM number must remain open until the local/support EFS notifies you that the plan is certified by an engineer, and any necessary modifications are complete.
- **BMP-12: Treated Wood:** All new and used treated wood poles shall be managed in accordance with ENV-3000P-07 and stored on horizontal non-treated wood, concrete, or metal support beams raised off the ground to prevent decay and damage. As with any hazardous material, store treated wood away from storm drains.
- **BMP-13: Treated Wood Waste:** All treated wood waste and debris (e.g., poles, cross-arms, saw dust, chips, etc.) shall be transported to the local PG&E or PG&E Contractor approved collection point and placed in designated bins. No poles may be left in place, unless formal authorization is obtained from applicable State and/or Federal agencies or a liability waiver is signed. Please refer to Job Aid ENV-4000P-07.
- **BMP- 14: Stormwater Measures:** The Project EFS will provide the Stormwater Group with the following upon completion of the PER: Stormwater Needs Request Form, Soil Disturbance Calculation Spreadsheet, and a KMZ file showing the proposed work area. These documents shall be sent by the Project EFS, via email, to: stormwater@pge.com (if applicable).

- **BMP- 15: Stormwater Management A-ESCPs:** standard PG&E good housekeeping and stockpile management measures shall be implemented.
- **BMP-16: Small Excavation: Construction Dewatering:** Dewatering of trenches or excavations may be required. The Environmental Lead/Project EFS shall be notified at least 30 days in advance to ensure the appropriate dewatering methods are used, proper notifications are made, and, if necessary, applicable authorizations/permits are obtained. All dewatering activities must be coordinated through the Environmental Lead/Project EFS throughout the duration of the project.

3.10.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on hydrology and water quality resources. This analysis assumes that construction and design of Project components would utilize standard site preparation practices, engineering designs, and would implement APMs and PG&E construction measures (AMMs and BMPs) for the Orchard Substation Facilities and PG&E Interconnection Facilities, respectively.

Direct and Indirect Effects

- a) **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality: *Less than Significant.***

During construction, soil-disturbing activities such as excavation, earth moving, grading, and trenching would occur to facilitate the site work necessary to support the Orchard Substation Facilities. As outlined in Table 2-2 in Chapter 2, *Project Description*, the Orchard Substation Facilities work areas would include areas of both temporary (staging and dirt borrow areas) and permanent ground disturbance of more than 1 acre. The use of fuels and oils, paints and thinners, and solvents and cleaning solutions would be required for construction. Pollutants and sediment could be mobilized and transported off-site by stormwater runoff, potentially degrading the water quality in off-site drainages or in groundwater.

Because the Project's construction would involve soil disturbance of more than 1 acre of land surface, a Construction General Permit would be required. Ground disturbance would involve grading and excavation required for the construction for the Orchard Substation, permanent access roads, and staging areas, and ancillary facilities (telecommunication lines and distribution) would require subsurface poles and trenching to install underground lines. The Project would be required to conform with the regulations, standards, and other requirements of the Construction General Permit, including the implementation of one or more SWPPPs and associated BMPs to limit erosion, siltation, run-on, and runoff from the Project site.

Based on a review of the geotechnical engineering report prepared for the Orchard Substation Facilities, groundwater was not encountered at a depth of 51.5 feet below ground surface while soil borings were conducted at the Project site (Terracon, 2019). Project construction would not require or include excavation at depths where groundwater would be encountered; therefore, it is

not likely that dewatering would be needed. In the unlikely event that groundwater is encountered during construction (pursuant to APM WQ-2 and BMP-16), such groundwater would be handled and discharged in a manner consistent with all applicable state and federal requirements.

With implementation of one or more SWPPP(s) and their associated BMPs (APM WQ-1), in compliance with the NPDES Construction General Permit, impacts on ground and surface water quality would be less than significant. Adherence to regulatory requirements, including but not limited to appropriate measures for hazardous materials management (identified in APM HAZ-2, BMP-8, and BMP-9), spill prevention and containment (identified in APM HAZ-1 and BMP-11) would limit contamination of surface and groundwater during construction, operation, and maintenance of the Project. Impacts would 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: *Less than Significant.*

It is anticipated that construction of the Project would require water resources for dust control and site work, some of which may be acquired through off-site groundwater sources. No water would be required during the O&M phase. As stated in Chapter 2, *Project Description*, it is estimated that approximately 740,000 gallons (or 2.27 acre-feet) of potable water would be used during the 22-month construction period for the Orchard Substation Facilities. The estimated water requirements for fugitive dust control (BMP-6) and other construction purposes for the PG&E Interconnection Facilities portion of the Project have not been quantified. However, given the anticipated level of disturbance relative to the Orchard Substation Facilities, a comparably smaller quantity of water would be required for the PG&E Interconnection. Water would be trucked in from an off-site location using local sources within the city of Huron or the city of Coalinga, both of which receive water from the Central Valley Project via WWD. As described in the Westlands Subbasin GSP, multiple sources of water are part of WWD's water supply portfolio. Use of water for Project construction purposes would represent approximately 0.00025 percent of the overall water used by WWD in 2019 and 2020 (WWD 2021). This quantity of water used during construction would not contribute to a substantial decrease in groundwater supply.

The Project's components would include the addition of impervious surfaces upon the site such as foundation pads for the Orchard Substation structures and new PG&E Bays 1 and 2 and transition station foundations. However, the majority of the Orchard Substation site, including the stormwater detention basin, would remain unlined and unpaved, which would allow for groundwater recharge upon the site. Similarly, the majority of lands at the site of the PG&E Gates Substation would remain unpaved. Furthermore, rainwater falling on proposed new impervious surfaces would flow off to soil and infiltrate down to groundwater, as occurs under existing conditions. Therefore, considering the minimal and temporary water requirements and negligible addition of impervious surfaces, sustainable management of the basin would not be impeded by the Project. Impacts under this criterion would 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 : i) Result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows: *Less than Significant.***

The Project site is relatively flat and there are no surface waters in the immediate vicinity of the site. Given the site's topography, erosion during construction is unlikely to be substantial. However, drainage patterns would be altered through site preparation, grading, excavation, and other construction activities to develop the Orchard Substation and ancillary facilities. Proposed below-ground components including conductors and subsurface cables, equipment foundations to support Project structures, the grounding grid, and oil containment for the Project's transformers and other proposed elements would involve ground disturbance. Approximately 20 new wood poles would be set 8 to 10 feet below ground level to support the power distribution line on the eastern boundary of the Project site. Construction of the PG&E Interconnection Facilities (described in Chapter 2, *Project Description*) would require above-ground and subsurface trenching to install fiber optic cables. As described under criterion a), soil-disturbing construction activities would occur over an area exceeding 1 acre in size, and therefore would be required to obtain coverage under the NPDES Construction General Permit. One or more SWPPPs and their associated BMPs would be implemented to control runoff, and minimize erosion at the sites and vicinity. For the PG&E facilities, standard measures for stormwater management, erosion and sediment control, good housekeeping, and stockpile management would be implemented (BMP-14 and BMP-15).

As described in Chapter 2, *Project Description* (Section 2.7.10.3), the substation pad would be graded to drain directly toward the Project's 1,250-cubic-yard stormwater detention basin. The conveyance system would be lined to direct runoff from the Project's substation pad. The earthen stormwater detention basin would not be lined, which would allow for infiltration and groundwater recharge. Access roads are proposed to be graveled and would therefore retain some perviousness, also allowing for groundwater recharge.

The Project would include a stormwater detention basin designed to capture runoff from a 100-year storm and 24-hour rainfall event and would release the captured water over a 48-hour period, as described in Chapter 2, *Project Description*. This design reduces the risk that stormwater overflow from the detention basin could occur as sheet flow on the adjacent level land surface during a storm exceeding the basin's design capacity and eliminate risk of erosion and scouring at discharge locations. With compliance with regulatory requirements, such as implementing one or more SWPPPs and associated BMPs (APM WQ-1) to control stormwater, the Project would not contribute substantial sources of sediment or otherwise result erosion, or conditions of runoff. Impacts under this criterion would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation: *No Impact*.

Because the Project is not located in the coastal zone or near a large body of water (that could be susceptible to seiches), or in a flood hazard zone identified by FEMA, there is no risk of inundation associated with such hazards. Therefore, no release of pollutants due to inundation would occur with construction or operation of the Project or proposed PG&E interconnection elements. The Project would have no impact associated with this criterion.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan: *Less than Significant*.

Because the Project would comply with regulatory requirements of the NPDES Construction General Permit, there would be no conflict with the Central Valley Basin Plan pertaining to water quality. Additionally, the Project includes design elements to limit runoff and otherwise detain stormwater within the site.

As identified in Section 3.9, *Hazards and Hazardous Materials*, and noted as APM HAZ-1 and BMP-11, a site-specific spill prevention containment and countermeasures plan (SPCCP) would be prepared prior to the initiation of construction. The Project would maintain secondary containment to eliminate release of potential site contaminants. Per APM HAZ-2 and BMP-11, and pursuant to state and federal regulations, a hazardous materials management plan would be implemented during construction and operation of the Project. Measures identified in the HMMP (see Chapter 2, Section 2.5.2.13 and Table 2-10; see also BMP-8) would help to limit site contamination, which would be consistent with the Basin Plan objectives for the protection of surface water and groundwater quality.

Because the Project would not add extensive impervious surface areas or demand ongoing water resources (following the temporary construction period), there would be no conflict with the goals of the Westside Subbasin Groundwater Management Plan. Rainwater falling on impervious surfaces would flow into the unlined detention basin or flow off to surrounding pervious soil and infiltrate into the subsurface, as it does under existing conditions. Construction and operational impacts under this criterion would be less than significant.

3.10.5 References

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Federal Emergency Management Agency (FEMA), 2009. Map Service Center. Available online: <https://msc.fema.gov/portal/home>. Accessed September 21, 2021.

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3.11 Land Use and Planning

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 Environmental Setting

The study area for the analysis of potential impacts to land use and planning is defined as the footprint of all Project components, including all areas of temporary and/or permanent ground disturbance and the surrounding land uses within which the Project would be constructed and operated.

The Project site is located on approximately 20 acres in unincorporated western Fresno County. Interstate 5 is located approximately 2.2 miles to the west and State Route 269 is located approximately 1 mile east of the site. The City of Huron is located approximately 3.3 miles to the northeast. The Project site previously contained a vineyard that has been removed; the site is not currently being used for agricultural production. The PG&E Gates Substation is located directly south of the Project site. Existing transmission lines from the Gates Substation cross areas of the Project site that would be used for the site access roadways. An existing solar facility is located adjacent to the Gates Substation on the west. Areas adjacent to the Project site on the north, east, and west are in active agricultural production. An existing unpaved road runs east-west between the Project site and the Gates Substation.

The Project site lies within Fresno County’s jurisdiction and land uses on the Project site are governed by the Fresno County General Plan and Zoning Ordinance.

3.11.2 Regulatory Setting

Federal

No federal statutes, regulations, plans, or policies govern land use or planning on the Project site.

State

California Public Utilities Commission General Order No. 131-D

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s

jurisdiction.” Although such projects are exempt from local land use and zoning regulations and discretionary permitting (i.e., they would not require discretionary approval from a local decision-making body such as a planning commission, county board of supervisors or city council), General Order No. 131-D, Section XIV.B requires that in locating a project “the public utility shall consult with local agencies regarding land use matters.” The public utility would be required to obtain any required non-discretionary local permits.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. The discussion below presents local policies and regulations for informational purposes only; the CPUC does not consider these regulations “applicable.”

County of Fresno

General Plan

The Fresno County General Plan is the County’s long-range planning document. It consists of seven elements: Economic Development; Agriculture and Land Use; Transportation and Circulation; Public Facilities and Services; Open Space and Conservation; Health and Safety; and Housing. The Agriculture and Land Use Element describes the County’s Land Use Diagram and related development standards for unincorporated land within the County, and sets out goals, policies, and implementation programs for Resource Lands (including agriculture), Rural Development (non-agriculture), Urban Development, and Administration (Fresno County, 2000).

The public review drafts of the General Plan Background Report, Policy Document, and Zoning Ordinance Update were released on January 26, 2018. On April 14, 2020 the Board of Supervisors approved a Revised Scope of Work for the General Plan Review and the Zoning Ordinance Update. Public review drafts of the revised General Plan Policy Document, Background Report, and Zoning Ordinance Update were released in July 2021 (Fresno County, 2021). Because the updated General Plan has not been approved, and no resulting revisions to the 2000 General Plan and the Zoning Ordinance have been made, the provisions of the 2000 General Plan and the Zoning Ordinance continue to govern use of the Project site and are considered in this analysis.

The Project site is designated in the General Plan as “Agriculture,” which provides for the production of crops and livestock, and for location of necessary agriculture commercial centers, agricultural processing facilities, and certain nonagricultural activities (General Plan Table LU-3). No overlay designations, regional plans, community plans, or specific plans described in the General Plan apply to the Project site (Fresno County, 2000). Section 3.2.2, *Agriculture and Forestry Resources*, contains specific information pertaining to Agriculture resources within and near the Project site.

The Project site is not located within the jurisdiction of a community plan, specific plan, or regional plan as identified by the Fresno County General Plan. General Plan policies that are relevant to the Project include:

Policy LU-A.3: The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value added processing facilities, and certain non-agricultural uses listed in Table LU-3. Approval of these and similar uses in areas designated Agriculture shall be subject to the following applicable criteria:

- The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
- The use should not be sited on productive agricultural lands if less productive land is available in the vicinity;
- The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter (1/4) mile radius;
- A probable workforce should be located nearby or be readily available.

Policy LU-A.13: The County shall protect agricultural operations from conflicts with nonagricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.

Policy LU-A.14: The County shall ensure that the review of discretionary permits includes an assessment of the conversion of productive agricultural land and that mitigation be required where appropriate.

Policy LU-A.16: The County should consider the use of agricultural land preservation programs that improve the competitive capabilities of farms and ranches, thereby ensuring long-term conservation of viable agricultural operations. Examples of programs to be considered should include: land trusts; conservation easements; dedication incentives; new and continued Williamson Act contracts; Farmland Security Act contracts; the California Farmland Conservancy Program Fund; agricultural education programs; zoning regulations; agricultural mitigation fee program; urban growth boundaries; transfer of development rights; purchase of development rights; and agricultural buffer policies.

General Plan programs that are relevant to the Project include:

Program LU-A.C: The County shall develop and implement guidelines for design and maintenance of buffers to be required when new non-agricultural uses are approved in agricultural areas. Buffer design and maintenance guidelines shall include, but not be limited to, the following:

- a. Buffers shall be physically and biologically designed to avoid conflicts between agriculture and non-agricultural uses.
- b. Buffers shall be located on the parcel for which a permit is sought and shall protect the maximum amount of farmable land.
- c. Buffers generally shall consist of a physical separation between agricultural and non-agricultural uses. The appropriate width shall be determined on a site-by-site basis taking into account the type of existing agricultural uses, the nature of the proposed development, the natural features of the site, and any other factors that affect the specific situation.

- d. Appropriate types of land uses for buffers include compatible agriculture, open space and recreational uses such as parks and golf courses, industrial uses, and cemeteries.
- e. The County may condition its approval of a project on the ongoing maintenance of buffers.
- f. A homeowners' association or other appropriate entity shall be required to maintain buffers to control litter, fire hazards, pests, and other maintenance problems.
- g. Buffer restrictions may be removed if agricultural uses on all adjacent parcels have permanently ceased. (See Policy LU-A.16)

Program LU-A.E: The County shall continue to implement the County's Right-to-Farm Ordinance, and will provide information to the local real estate industry to help make the public aware of the right-to-farm provisions in their area. (See Policy LU-A.15)

Program LU-A.I: The County shall assess the approaches to determining agricultural land values in the 1981 Farmland Protection Policy Act land evaluation and site assessment (LESA) system, and the Tulare County Rural Valley Lands Plan, 1975 amendment, to determine the potential for developing a similar process for identifying and ranking the value of agricultural land in Fresno County. If appropriate, the County shall establish an agricultural quality scale system to assist the Planning Commission and Board of Supervisors in agricultural land use conversion decisions. (See Policy LU-A.16.)¹

Zoning

According to the Fresno County Zoning Map, the Project site is zoned "Exclusive Agricultural, 20-acre minimum parcel size (AE-20)." Fresno County Zoning Ordinance Code Section 816.2.D identifies electrical transmission substations and electric distribution substations as uses permitted subject to Director Review and Approval (Fresno County, 2018a).

3.11.3 Applicant Proposed Measures and PG&E Construction Measures

No applicant proposed measures or PG&E construction measures (avoidance and minimization measures or best management practices) have been identified to address potential impacts to land use and planning.

3.11.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on land use and planning. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities.

¹ As of April 2020, the assessment of the land evaluation tools such as LESA had not been completed (Fresno County 2020).

Direct and Indirect Effects

a) Physically divide an established community: *No Impact.*

The Project site is located in rural, unincorporated western Fresno County approximately 3.3 miles southwest of the City of Huron. Typically, the division of an established community would result from the construction of a physical barrier to neighborhood access or the removal of a means of access. The Project would not physically divide an established community as the construction, operation, and decommissioning phases of the Project do not propose any features that would create a physical barrier that would hinder existing community access. Additionally, the Project would not involve the removal of any existing publicly-used means of access. Project elements would not cross through any existing community. Therefore, the Project would not physically divide an established community.

Construction and operation of the PG&E infrastructure would not physically divide an established community because no such community is located within or adjacent to these components of the Project; therefore, no impact would 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: *No Impact.*

The CPUC has regulatory authority over the Project; therefore, is not subject to local regulations of Fresno County. The Project would though be consistent with the Fresno County General Plan and zoning designation of the Project site. General Plan Policy LU-A.3 allows electrical substations in areas designated Agriculture, subject to certain requirements. The Project would satisfy the applicable requirements because: 1) siting the Project on agricultural land is necessary in order to interconnect to the adjacent Gates Substation, 2) no other less productive agricultural land is available for the Project as the Gates Substation is surrounded on all sides by Department of Conservation-designated Prime Farmland, 3) operation of the Project would not require a source of water, therefore it would not result in a detrimental impact on water resources, 4) the Project would not have a detrimental impact on the use or management of surrounding properties, and 5) although the facility would be unstaffed, locally-available maintenance/technical staff would be provided. The Project would not conflict with the existing zoning for agricultural use because the site's AE zoning designation allows electrical transmission substations, subject to Director Review and Approval, provided the Project would not be detrimental to the character of the development in the immediate vicinity of the site or to the public health, safety, and general welfare. (Fresno County Zoning Code, Section 872) (Fresno County, 2018b). The Project site is adequate in size and shape to accommodate all necessary features of the Project and it would not contribute operational traffic to local roadways. The substation and other infrastructure would be buffered from adjacent agricultural areas by an 8-foot-tall chain link security fence with an additional 1-foot barbed wire extension at the top. The Project, being a similar electrical utility infrastructure project as the existing Gates Substation located immediately adjacent to the Project site, would not be detrimental to the character of development in the immediate site vicinity. The Project would not conflict with a plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; no impact would occur.

The PG&E infrastructure would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project that has been adopted for the purpose of avoiding or mitigating an environmental effect. All PG&E infrastructure would be located within the PG&E Gates Substation property; therefore, no impact would occur.

3.11.5 References

- Fresno County, 2000. Fresno County General Plan Policy Document. Agriculture and Land Use Element. Available online: <https://www.co.fresno.ca.us/home/showdocument?id=18117>.
- Fresno County, 2018a. Zoning Ordinance of the County of Fresno, Section 816: “AE” Exclusive Agricultural District. Amended June 12, 2018.
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3.12 Mineral Resources

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XII. MINERAL RESOURCES — 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section describes the existing sources of mineral resources in the Project study area and evaluates the potential for construction, operation, and maintenance of the Project to result in the loss of availability of known or locally important mineral resources. For the purposes of the evaluation of mineral resources, the study area was defined as the footprint of all components of the Project including all areas of temporary and/or permanent ground disturbance.

3.12.1 Environmental Setting

Fresno County has historically produced abundant amounts of a wide variety of mineral resources. Mineral resources from Fresno County include: aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction and/or industrial applications (asbestos, high-grade clay, diatomite, granite, gypsum, and limestone). Aggregate and petroleum are the county’s most significant extractive resources. (Fresno County, 2000a).

Mineral Resources

Multiple sources of information were consulted to determine the presence of mineral resources within the study area. These included the Mineral Resources Data System (MRDS), administered by the U.S. Geological Survey (USGS), which provides data describing mineral resources, including deposit name, location, commodity, deposit description, production status and references and which can be used to confirm the presence/absence of existing surface mines, closed mines, occurrences/prospects, and unknown/undefined mineral resources. According to the available MRDS data, there are no significant mineral resources at the Project site or in the area (USGS, 2021).

The California Geological Survey (CGS) maps and regulates the locations of potential mineral resources in California consistent with the Surface Mining and Reclamation Act (SMARA). In order to protect these potential mineral resources, the CGS has classified the regional significance of mineral resources into mineral resource zones (MRZs) and mapped them (see the *Regulatory Section*, below, for more details about SMARA and MRZs). The Project site is within an area that has not been mapped under SMARA, so the Project site is in an area that has not been designated a MRZ (CGS, 2021).

Oil, Gas, and Geothermal Resources

The California Geologic Energy Management Division (CalGEM)¹ provides oversight of the oil, natural gas, and geothermal industries, and regulates the drilling, operation, and permanent closure of energy resource wells. CalGEM’s online mapping application, Well Finder, was reviewed to determine the presence of any oil, gas, or geothermal resources in and around the Project site. Well Finder data indicates that there are no significant resources at or near the Project site (CalGEM, 2021).

3.12.2 Regulatory Setting

Federal

No federal regulations apply to mineral resources within the study area.

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) (Pub. Res. Code §§2710-2796) and its implementing regulations (14 Cal. Code Regs. §3500 et seq.) establish a comprehensive state policy for the conduct of surface mining operations and for the reclamation of mined lands to a usable condition that is readily adaptable for alternative land uses. SMARA encourages the production, conservation, and protection of the state’s mineral resources and recognizes that “the state’s mineral resources are vital, finite, and important natural resources and the responsible protection and development of these mineral resources is vital to a sustainable California” (Pub. Res. Code §2711). Under SMARA, the term “minerals” includes “any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but not limited to, coal, peat, and bituminous rock, but excluding geothermal resources, natural gas, and petroleum” (14 Cal. Code Regs. §3501).

The CGS maps and regulates the locations of potential mineral resources in California consistent with SMARA. In order to protect these potential mineral resources, the CGS has classified the regional significance of mineral resources into MRZs and mapped them. Descriptions of the MRZ categories are provided in **Table 3.12-1**. As noted above, the Project site is within an area that has not been given a MRZ designation.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Details below that relate to local regulations are provided for informational purposes.

¹ Formerly, the California Division of Oil, Gas, and Geothermal Resources (DOGGR).

**TABLE 3.12-1
 CALIFORNIA MINERAL LAND CLASSIFICATION SYSTEM CATEGORY DESCRIPTIONS**

Mineral Resource Zone Category	Category Description	
MRZ-1	<i>Areas of No Mineral Resource Significance</i>	
MRZ-2	Demonstrated Reserves	<i>Areas of Identified Mineral Resource Significance</i>
MRZ-3	Known Mineral Occurrence	<i>Areas of Undetermined Mineral Resource Significance</i>
MRZ-4	No Known Mineral Occurrence	<i>Areas of Unknown Mineral Resource Significance</i>

SOURCE: CGS, no date (nd)

Fresno County General Plan

The Fresno County General Plan contains several Goals and Policies that are related to Mineral Resources in the county (Fresno County, 2000a). Additionally, the General Plan Background Report includes several figures depicting the various mineral resources throughout the county. The figures in the General Plan Background Report indicate that the Project site is not located within any area designated as an important mineral resource and that there are no significant resources near the Project site (Fresno County, 2000b).

3.12.3 Applicant Proposed Measures and PG&E Construction Measures

No applicant proposed measures or PG&E construction measures (avoidance and minimization measures or best management practices) have been proposed to address Project impacts on mineral resources.

3.12.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on mineral resources. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities.

To evaluate potential impacts of the Project on mineral resources, the locations of Project components were compared with maps of known mineral resources of value to the state, region, and local jurisdictions to determine whether Project components would occur on or otherwise limit access to these resources. The outcomes of this analysis are described below.

Direct and Indirect Effects

a,b) 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, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan: *No Impact*.

According to the review of available data from the USGS, CGS, CalGEM, and Fresno County, there are no significant mineral resources at the Project site, nor would the Project result in the loss of availability of any mineral resource in the area. Additionally, Project activities would not result in the loss of availability of any known mineral resources or locally-important mineral resources. Therefore, there would be no impact to mineral resources.

3.12.5 References

California Geological Survey (CGS), no date (nd). Guidelines for Classification and Designation of Mineral Lands. California Surface Mining and Reclamation Policies and Procedures Special Publication 51.

CGS, 2021. CGS Information Warehouse: Mineral Lands Classification, interactive map. Accessed on September 20, 2021. Online at: <https://mrdata.usgs.gov/mrds/map-graded.html>.

California Geologic Energy Management Division (CalGEM), 2021. Well Finder, interactive map. Online at: <https://maps.conservation.ca.gov/doggr/wellfinder/#openModal>.

Fresno County, 2000a. Fresno County General Plan Policy Document. October 3, 2000.

Fresno County, 2000b. Fresno County General Plan Background Report. Adopted October 3, 2000.

United States Geological Survey (USGS), 2021. Mineral Resources Data System, interactive map. Accessed on September 20, 2021. Online at: <https://mrdata.usgs.gov/mrds/map-graded.html>.

3.13 Noise and Vibration

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Background

Sound is energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear’s decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).

Noise Exposure and Community Noise

An individual’s noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, community noise varies continuously

with time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. Background noise levels change throughout a typical day, but do so gradually, corresponding with the addition and subtraction of distant noise sources and atmospheric conditions. The addition of short-duration, single-event noise sources (e.g., flyovers by helicopters and other aircraft, horns, sirens) makes community noise constantly variable throughout a day.

These successive additions of sound to the community noise environment cause the community noise level to vary from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. Noise descriptors discussed in this analysis are summarized below:

- L_{eq} : The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- DNL: The day-night noise level (DNL), or the energy average of the A-weighted sound levels occurring during a 24-hour period, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
- CNEL: The Community Noise Equivalent Level (CNEL), which, similar to the DNL, adds a 5-dBA penalty for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to the 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.
- L_x : The sound level that is equaled or exceeded x percent of a specified time period. The L_{50} represents the median sound level (i.e., the noise level exceeded 50 percent of the time, or 30 minutes out of an hour).
- L_{max} : The instantaneous maximum noise level measured during the measurement period of interest.

Effects of Noise on People

There is no universally acceptable way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance and different tolerances to noise tend to develop based on an individual’s past experiences with noise. Thus, an important means of predicting a human reaction to a new noise environment is to identify how the new noise compares to the existing noise levels to which one has adapted: the so called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans, 2013):

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.

- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response.
- A change in level of at least 5 dB is required before any noticeable change in human response would be expected.
- A 10-dB change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. A ruler is a linear scale: it has marks on it corresponding to equal quantities of distance. One way of expressing this is to say that the ratio of successive intervals is equal to 1. A logarithmic scale is different in that the ratio of successive intervals is not equal to 1. Each interval on a logarithmic scale is some common factor larger than the previous interval. A typical ratio is 10, so that the marks on the scale read: 1, 10, 100, 1,000, 10,000, etc., doubling the variable plotted on the x-axis. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Sound level naturally decreases with more distance from the source. This basic attenuation rate is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate (lessen) at a rate of 6 dB per doubling of distance from the source. In many cases, noise attenuation from a point source increases by 1.5 dB from 6 dB to 7.5 dB for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as *excess ground attenuation*. The basic geometric spreading loss rate is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dB per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.

Widely distributed noises such as a street with moving vehicles (a “line” source) typically would attenuate at a lower rate of approximately 3 dB for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases by 1.5 dB to 4.5 dB for each doubling of distance. Atmospheric effects, such as wind and temperature gradients, can also influence noise attenuation rates from both line and point sources of noise. However, unlike ground attenuation, atmospheric effects are constantly changing and difficult to predict.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are

used to quantify vibration. The *peak particle velocity* (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts on buildings. Although PPV is appropriate for evaluating building damage, it is less suitable for evaluating human response. Human response is better related to the average vibration amplitude. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration, as numbers can differ over several orders of magnitude. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration (FTA, 2018).

3.13.1 Environmental Setting

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

The closest sensitive receptors are residences located roughly 1.8 miles northeast of the Project site south of West Tractor Avenue, approximately 1,200 feet east of State Route (SR) 269. This distance to the closest sensitive receptors applies to both the Orchard Substation Facilities and the Pacific Gas and Electric Company (PG&E) Interconnection Facilities.

Existing Noise Environment

The Project site and surrounding areas include electrical utilities (multiple power lines and the PG&E electrical Gates Substation to the south) and agricultural uses. Several existing solar facilities are located to the southwest. Sources contributing to the ambient noise environment in the Project vicinity are operational activities at the substation and solar facilities, farming operations, and traffic on local roads. None of these are considered major noise sources that would be expected to lead to high ambient noise levels within and around the Project site. As described above, there are no noise-sensitive land uses in the vicinity of the Project site. Ambient noise levels at the nearest receptors are dominated by traffic on adjacent roadways and agricultural activities.

Based on traffic data maintained by the California Department of Transportation (Caltrans), the segment of SR 269 north of West Jayne Avenue had traffic volumes of approximately 5,000 average daily trips and approximately 600 peak hour trips in 2017 with a posted speed limit of 55 miles per hour. The general rule for normal traffic conditions is that the L_{eq} at a location during the peak traffic hour is within 1 to 2 dB of the DNL at that location (Caltrans, 1998). The ambient traffic noise level at the closest residence has been calculated using algorithms from the Federal Highway Administration's (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-

108) with Caltrans peak-hour and average daily traffic volumes for SR 269. At 1,200 feet from SR 269, using propagation for soft surfaces, the ambient traffic noise levels at the nearest residence are estimated to be approximately 49 dBA for both DNL and peak-hour L_{eq} , and approximately 44 dBA L_{eq} for the average hour (ESA, 2021).

3.13.2 Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans tend to identify general principles intended to guide and influence development plans; local noise ordinances and codes establish standards and procedures for addressing specific noise sources and activities.

Federal

Federal Transit Administration and Federal Railroad Administration Standards

Although the Federal Transit Administration (FTA) standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018) are routinely used for projects under review by local jurisdictions that have not adopted their own vibration impact standards. The FTA and Federal Railroad Administration have published guidelines for assessing the impacts of groundborne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA's threshold of architectural damage for structures of conventional construction from groundborne vibration is 0.2 inches per second (in/sec) PPV or 94 VdB (dB units of 1 microinch per second). The FTA threshold for human annoyance at residential uses is 72 VdB for "Frequent Events," or more than 70 vibration events of the same kind per day.

Occupational Safety and Health Act

Under the Occupational Safety and Health Act of 1970 (U.S. Code Title 29, Section 651 et seq.), the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) adopted regulations (Code of Federal Regulations Title 29, Section 1910.95) designed to protect workers against the effects of occupational noise exposure. These regulations list limits on noise exposure levels as a function of the amount of time during which the worker is exposed, as shown in **Table 3.13-1**. The regulations further specify requirements for a hearing conservation program (Section 1910.95(c)), a monitoring program (Section 1910.95(d)), an audiometric testing program (Section 1910.95(g)), and hearing protection (Section 1910.95(i)). There are no federal laws governing community noise.

Although no federal noise regulations exist, the U.S. Environmental Protection Agency (USEPA) has published noise guidelines (USEPA, 1974). The USEPA guideline recommends a DNL of 55 dBA to protect the public from the effect of broadband environmental noise outdoors in residential areas and farms, and other outdoor areas where people spend widely varying amounts of time, and other places in which quiet is a basis for use (USEPA, 1974).

**TABLE 3.13-1
OSHA-PERMISSIBLE NOISE EXPOSURE STANDARDS**

Duration of Noise (hours/day)	A-Weighted Noise Level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

SOURCE: USEPA, 1974. Code of Federal Regulations Title 29, Section 1910.95, Table G-16.

State

Government Code Section 65302 encourages counties and cities to implement a noise element as part of the general plan. In addition, the California Governor’s Office of Planning and Research has developed guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.

The California Occupational Safety and Health Administration (Cal-OSHA) has published Occupational Noise Exposure Regulations (California Code of Regulations Title 9, Sections 5095–5099) that set employee noise exposure limits. These standards are equivalent to the federal OSHA standards described above.

Local

Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans tend to identify general principles intended to guide and influence development plans; local noise ordinances and codes establish standards and procedures for addressing specific noise sources and activities. The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. However, the CPUC is using the following noise regulations for the basis of the significance thresholds used in this CEQA review.

Fresno County General Plan Health and Safety Element

The Fresno County General Plan Health and Safety Element establishes countywide land use compatibility guidelines. For example, the maximum allowable noise exposure level for residential land use is 60 dBA CNEL (Fresno County, 2000). The Fresno County General Plan also includes the following policies relevant to noise:

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

Policy HS-G.4: So that noise mitigation may be considered in the design of new projects, the County shall require an acoustical analysis as part of the environmental review process where:

- a. Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels that are “generally unacceptable” or higher according to the Chart HS-1: “Land Use Compatibility for Community Noise Environments;”
- b. Proposed projects are likely to produce noise levels exceeding the levels shown in the County’s Noise Control Ordinance at existing or planned noise-sensitive uses.

Policy HS-G.5: Where noise mitigation measures are required to achieve acceptable levels according to land use compatibility or the Noise Control Ordinance, the County shall place emphasis of such measures upon site planning and project design. These measures may include, but are not limited to, building orientation, setbacks, earthen berms, and building construction practices. The County shall consider the use of noise barriers, such as soundwalls, as a means of achieving the noise standards after other design-related noise mitigation measures have been evaluated or integrated into the project.

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

Policy HS-G.8: The County shall evaluate the compatibility of proposed projects with existing and future noise levels through a comparison to Chart HS-1, “Land Use Compatibility for Community Noise Environments.” [Chart HS-1 is presented here as **Figure 3.13-1.**]

Fresno County Noise Ordinance

The Fresno County Noise Ordinance (Chapter 8.40 of the Fresno County Development Code) applies to noise sources that can be regulated by Fresno County, such as equipment related to commercial and industrial land uses. **Table 3.13-2** summarizes the County’s exterior noise standards that would be applicable to the Project. As indicated in the table, it would be unlawful for Project-related on-site operation and/or maintenance noise levels to exceed an L_{50} of 50 dBA during daytime hours at the nearby noise-sensitive uses such as residences, schools, hospitals, churches, or public libraries.

**TABLE 3.13-2
FRESNO COUNTY EXTERIOR NOISE LEVEL STANDARDS**





Cumulative min/hr (L_x)	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
30 (L ₅₀)	50	45
15 (L ₂₅)	55	50
5 (L _{8.3})	60	55
1 (L _{1.7})	65	60
0 (L _{max})	70	65

NOTES:

In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted so as to equal the ambient noise level.

SOURCE: Fresno County, 1978.

Land Use Category	Community Noise Exposure (Outdoor) Ldn or CNEL, dB							
	50	55	60	65	70	75	80	85
Residential: Low-Density Single-Family, Duplex, Mobile Homes								
Residential: Multiple Family								
Transient Lodging: Motels, Hotels								
Schools, Libraries, Churches, Hospitals, Nursing Homes								
Auditoriums, Concert Halls, Amphitheaters								
Sports Arena, Outdoor Spectator Sports								
Playgrounds, Neighborhood Parks								
Golf Courses, Riding Stables, Water Recreation, Cemeteries								
Office Buildings, Business Commercial and Professional								
Industrial, Manufacturing, Utilities, Agriculture								

 <p>Normally Acceptable</p>	<p>Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.</p>
 <p>Conditionally Acceptable</p>	<p>New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.</p>
 <p>Generally Unacceptable</p>	<p>New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.</p>
 <p>Land Use Discouraged</p>	<p>New construction or development should generally not be undertaken.</p>

SOURCE: Fresno County 2000 General Plan

Gates Dynamic Reactive Support Project

Figure 3.13-1

Community Noise Environment

In addition to the exterior noise standards, noise ordinance Section 8.40.90, *Electrical Substations*, identifies a noise level limit of 50 dBA for electrical substations when measured 50 feet from an affected residence (Fresno County, 1978).

Section 8.40.060(C) of the ordinance exempts noise sources associated with construction activities from the standards provided they take place after 6:00 a.m. and before 9:00 p.m. on Monday through Friday, or after 7:00 a.m. and before 5:00 p.m. on weekends. Section 8.40.060(G) of the Fresno County Noise Ordinance further provides that noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities are also exempt.

3.13.3 Applicant Proposed Measures and PG&E Construction Measures

There are no applicant proposed measures or PG&E construction measures (avoidance and minimization measures or best management practices) to address noise and vibration.

3.13.4 Environmental Impacts and Mitigation Measures

Methodology and Assumptions

This analysis evaluates potential noise and vibration impacts of the Project based on a review of sensitive receptor locations, ambient noise levels, and projected noise levels that would be associated with construction, operation, and maintenance of the Project. The impact discussions presented below are based in part on the noise and vibration analysis of the Orchard Substation Facilities portion of the Project as presented in the Proponent's Environmental Assessment prepared as part of the application. This analysis was independently reviewed by CPUC's consultant, Environmental Science Associates (ESA), and determined to be suitable (in combination with other materials included in the formal record) to inform the preparation of this section.

The noise and vibration levels that would be associated with the PG&E Interconnection Facilities portion of the Project have not been quantified as part of the CPUC's Permit to Construct application process. However, it is assumed that the interconnection facilities would require construction and operation and maintenance equipment and vehicular activities similar to those for the Orchard Substation Facilities portion of the Project. Therefore, the noise and vibration levels estimated for the Orchard Substation Facilities portion of the Project also represent the noise levels that would be associated with the PG&E Interconnection Facilities portion of the Project.

Construction

Short-term noise level increases from construction activities would cause significant impacts if the activities would conflict with local policies or standards. Project-related construction activities taking place between 6:00 a.m. and 9:00 p.m. Monday through Friday and between 7:00 a.m. and 5:00 p.m. on weekends would be exempt from standards in the Fresno County Noise Ordinance. Any construction activities taking place outside these hours would be considered to result in a significant impact if resulting noise levels at the receptors would exceed the Fresno County exterior noise standard of 45 dBA L_{eq} for nighttime. Although there are no quantitative local

noise level standards applicable to Project construction, a quantitative analysis of its construction noise is included in this analysis for informational purposes.

Construction-related noise levels that would be associated with the Orchard Substation Facilities portion of the Project were estimated using the Roadway Construction Noise Model (RCNM). Although the model was developed by the FHWA, RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are also used to construct other project types. Input variables for the RCNM consist of the receiver/land use types, the equipment type and numbers (e.g., two graders, a loader, a tractor), the acoustical usage factor for each piece of equipment (e.g., percentage of time during a construction noise operation that a piece of construction equipment is operating at full power), and the distance between the construction activity and noise-sensitive receivers. No topographical or structural shielding was assumed in the modeling of construction noise (i.e., the receivers are modeled with no obstacles to the travel of sound between the construction activity and receiver location, a worst-case assumption). As discussed above, the noise levels estimated for the Orchard Substation Facilities portion of the Project also represent the noise levels that would be associated with the PG&E Interconnection Facilities portion of the Project.

Operation and Maintenance

Long-term operation and maintenance noise impacts would be considered significant if Project-related noise would exceed the Fresno County exterior noise standards of 45 dBA L_{50} during nighttime hours (i.e., 10:00 p.m. to 7:00 a.m.) or 50 dBA L_{50} during daytime hours (i.e., 7:00 a.m. to 10:00 p.m.). For most common noise sources, L_{50} can be interpreted as close to the L_{eq} metric. Therefore, if the Project would generate noise levels in excess of 50 dBA L_{eq} during the daytime or 45 dBA L_{eq} during the nighttime, such noise generation would constitute a significant noise impact. The Fresno County General Plan specifies CNEL-based community noise exposure levels that consider the contributions of daytime and nighttime noise levels. The maximum allowable noise exposure level for residential land use uses is 60 dBA CNEL.

Operation and maintenance-related noise levels that would be associated with the transformers, reactors, and heating, ventilation, and air conditioning (HVAC) units at the proposed Orchard Substation were estimated using industry standard reference noise levels. The PG&E Interconnection Facilities would not include any new operational sources of substantial noise.

Vibration

The CPUC and the County have not identified a quantitative vibration threshold to evaluate vibration impacts from construction or operation. Therefore, this analysis assumes that the Project would result in a significant construction vibration impact if buildings or sensitive individuals would be exposed to vibration levels equivalent to or higher than FTA's 0.2 in/sec PPV vibration threshold for architectural damage of conventional sensitive structures or the threshold of human annoyance for residential uses of 72 VdB for "Frequent Events," or more than 70 vibration events of the same source per day (FTA, 2018). The FTA impact assessment procedures and criteria are routinely used for projects under review by other jurisdictions that have not adopted their own vibration impact standards.

Direct and Indirect Effects

- a) **Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies: *Less than Significant.***

Construction

Construction of the Project is expected to last approximately 22 months. Project construction would consist of several phases, including site preparation and grading, installation of drainage and retention basins, foundations/supports, setting of equipment, installation of wiring and electrical systems, and assembly of the accessory components. Construction scenario assumptions used in this analysis, including phasing, equipment mix, and vehicle trips, were based on information presented in Chapter 2, *Project Description*, Section 2.5.2.16.

Construction of the Project would generate noise that would temporarily increase ambient noise levels in the Project vicinity. Project construction noise would be generated by the operation of on-site construction equipment such as water trucks, graders, loaders, excavators, and drill rigs, as well as from on-road sources such as vehicle trips transporting workers, equipment, and materials to and from the Project site. The magnitude of the impact at receptors would depend on the type of construction activity, equipment being used, duration of the construction phase, distance between the noise source and receiver, the presence of intervening structures that enhance attenuation, and the existing ambient noise levels at the receptors. Construction noise levels generated by equipment would also vary depending on several factors such as the type and age of equipment, specific equipment manufacture and model, the operations being performed, and the overall condition of the equipment and exhaust system mufflers. The maximum noise levels for the types of construction equipment that would be used for Project construction at a reference distance of 50 feet are presented in **Table 3.13-3**. As shown, Project construction equipment would generate L_{max} noise levels of up to 85 dBA at 50 feet. The typical operating cycles for construction equipment involve intermittent full-power operation followed by operation at lower power settings, which is accounted for in the acoustical usage factor, also shown in Table 3.13-3. Thus, average noise levels associated with operation of construction equipment over an hour are generally lower than the maximum noise levels indicated in Table 3.13-3.

Noise from construction equipment generally exhibits acoustical characteristics of point sources; noise from point sources attenuates at a rate of 6 to 7.5 dBA per doubling of distance from the source. Assuming an attenuation rate of 7.5 dBA per doubling of distance from the source for soft surfaces such as agricultural fields, construction noise levels generated during each construction phase of the Orchard Substation Facilities portion of the Project at the nearest noise-sensitive receptor were estimated and are summarized in **Table 3.13-4**. Consistent with the methodology recommended by the FTA, the noise levels shown in Table 3.13-4 consider the simultaneous operation of the two loudest pieces of construction equipment for the L_{eq} results. The modeling conservatively assumed that the two loudest pieces of construction equipment associated with an activity would operate simultaneously for the duration of that activity at the Project boundary closest to the receptor. No additional attenuation was assumed to account for any shielding effects due to intervening structures and buildings along the propagation path from the Project site to the nearest receptor.

**TABLE 3.13-3
 MAXIMUM NOISE LEVELS GENERATED BY TYPICAL CONSTRUCTION EQUIPMENT**

Construction Equipment	Acoustical Use Factor (%)	L _{max} at 50 feet, dBA	
		Equipment Spec Level	Actual Measured Level
Aerial Lift	20	85	75
Augur Drill Rig	20	85	84
Backhoe	40	80	78
Crane	16	85	81
Dump Truck	40	84	76
Drill Rig Truck	20	84	79
Excavator	40	85	81
Flatbed Truck	40	84	74
Forklift	20	85	75
Front-End Loader	40	80	79
Grader	40	85	NA
Pickup Truck	40	55	75
Roller	20	85	80
Skid Steer Loader	40	80	79
Tractor	40	84	NA
All Other Equipment > 5 HP	50	85	NA

NOTES:

NA = Not Available

SOURCE: FHWA, 2017.

**TABLE 3.13-4
 ORCHARD SUBSTATION FACILITIES—CONSTRUCTION NOISE LEVELS BY PHASE
 AT THE CLOSEST NOISE-SENSITIVE RECEPTORS**

Construction Phase	Equipment Used	Construction Duration	Estimated Construction Noise Level at Nearest Receptor at 1.8 miles (dBA, L _{eq})
Survey	Pickup truck (1)	6 months, March to August 2022	0.00
Site Preparation/Road Work	Grader (1), water truck (4), dump truck (4), roller (1), loader (1), pickup trucks (2)	3 months, March to May 2022	26.6
Below Grade Construction	Excavators (2), water trucks (4), forklift (1), pickup trucks (5), tractor/loader/backhoe (1), loader (1), drill rig (1), dump truck (1), skid steer loader (1), trencher (1)	3 months, June to August 2022	27.6
Above-Ground Construction and Equipment Installation	Pickup trucks (5), man lifts (2), cranes (2), forklifts (2), welding truck (1)	12 months, September 2022 to August 2023	26.5
Commissioning and Testing	Pickup trucks (5), forklifts (2), man lift (1)	7 months, June to December 2023	24.0

SOURCE: ESA, 2021.

As shown in Table 3.13-4, due to the large distance separating the Orchard Substation Facilities portion of the Project site from the nearest receptors, attenuated noise levels at the receptors would be up to 28 dBA. As discussed above under the *Methodology and Assumptions* heading, the noise levels estimated for the Orchard Substation Facilities portion of the Project also represent the noise levels that would be associated with the PG&E Interconnection Facilities portion of the Project. Assuming that both portions of the Project would produce a simultaneous noise level of 28 dBA at the nearest receptors, the combined noise level would be up to 31 dBA at the nearest receptor. This would not be expected to be audible over the existing daytime ambient noise levels at the receptor, which range from 44 dBA to 49 dBA. It should be noted that the noise level values in Table 3.13-4 are conservative in that they assume work occurring at the point on the Orchard Substation site boundary closest to the residences. In reality, construction equipment is anticipated to be mostly located in the central portion of the substation site, with some equipment operating south and southeast of the substation site during construction of the access road and PG&E Interconnection Facilities. Use of construction equipment during each phase would be distributed temporally as well as spatially, thereby further reducing the L_{eq} level to which receptors would be exposed.

As discussed previously, noise from construction activities would be exempt from the Fresno County General Plan's noise policies and the Fresno County Noise Ordinance standards if the activities would occur between the hours of 6:00 a.m. and 9:00 p.m. on weekdays, or 7:00 a.m. and 9:00 p.m. on Saturdays and Sundays. Construction activities at the Project site would generally be scheduled to occur during daylight hours 6 days per week (Monday through Saturday), which is consistent with the construction hours allowed by the Fresno County Noise Ordinance. Night work is not anticipated to be necessary, but in case it is required, Fresno County and CPUC approval would be obtained. With a noise level at the closest sensitive receptor of up to 31 dBA, nighttime construction noise levels would not exceed the County's nighttime exterior noise level standards.

Because Project construction would take place consistent with the hours allowed by the Fresno County Noise Ordinance, noise generated by daytime construction activities would not be audible above the existing ambient level at the nearest receptor 1.8 miles away. Because any nighttime construction noise levels would not exceed the County's nighttime exterior noise level standards, Project construction noise would result in a less-than-significant impact.

In addition to noise generated by on-site construction equipment, construction-related vehicle trips would increase noise levels along roadways leading to the Project site. Access to the Project site for construction equipment, supplies, and workers would be from West Jayne Avenue from Interstate 5 (I-5) to the west and from SR 269 to the east. The peak vehicle trips would occur during the first 6 months of construction, during the earthwork and grading-related phases of the Orchard Substation Facilities portion of the Project, due to debris hauling from and import of fill to the site. Total maximum daily trips (i.e., on-way trips) during this period would be approximately 90 trips per day, consisting of approximately 50 truck trips and 40 worker trips. Assuming that the PG&E Interconnection Facilities portion of the Project would result in a similar peak vehicle trip volume, the Project could result in a total maximum of 180 one-way daily trips. Other periods of Project construction would have lower daily vehicle trips, and therefore would have correspondingly lower noise levels.

The addition of 180 Project construction-related daily vehicle trips on the segment of West Jayne Avenue between I-5 and SR 269 would increase ambient traffic noise levels along this segment, but any increase would be slight, as these trips would be spread out throughout the day. More importantly, addition of Project construction traffic would not result in traffic noise impacts because no sensitive receptors are located along this segment of West Jayne Avenue. There would be no traffic noise impact during construction.

Operation and Maintenance

Once operational, the Orchard Substation would include two HVAC units, one for each static synchronous Compensator (STATCOM) facility; three 500-kilovolt (kV) transformers, two of which would be active simultaneously; and two 97.5 kV reactors.

Noise level data for the transformers and reactors were taken from the National Electrical Manufacturers Association (NEMA) test results for transformers and reactors (NEMA, 1993) based on the assumption that the proposed 500 kV transformers would each have an unshielded noise rating of 81 dBA at 1 meter (3 feet). The proposed 97.5 kV reactors would each have an unshielded noise rating of 79 dBA at 3 feet. Each STATCOM facility would include a 4,000-square-foot building requiring an estimated 7-ton HVAC unit. For modeling purposes, a Carrier 48HC-D08, 7.5-ton HVAC unit was modeled on the north side of each building. Noise levels that would be associated with the Orchard Substation’s operational sources, as derived from the manufacturers’ specification sheets, are summarized in **Table 3.13-5**.

**TABLE 3.13-5
 NOISE LEVELS FOR THE PROJECT’S OPERATIONAL SOURCES**

Source	Number of Units	Reference Distance (feet)	Maximum Noise Level at Reference Distance (L _{max} , dBA)
Three Phase 9.5–500 kV Transformers*	3	3	86
97.5 kV Reactors	2	3	82
HVAC Units (Carrier 48HC-D08)	2	60	81

NOTES:

* Of the three transformers, only two would be operational simultaneously.

SOURCE: ESA, 2021 based on NEMA, 1993 and LSPGC, 2021.

The combined noise level (L_{eq}) from the operation of these equipment at the nearest residential receptor 1.8 miles away was estimated, assuming that all equipment would operate at 100 percent power. This would be a conservative assumption, as it is unlikely that the equipment would operate continuously at full power at the same time. The attenuated noise level that would result at the nearest residence is estimated to be 29 dBA L_{eq}, well below the County’s daytime and nighttime exterior noise standards of 50 dBA and 45 dBA, respectively, and below the County’s noise level limit near residences of 50 dBA for electrical substations. The PG&E Interconnection Facilities portion of the Project would not include any new operational sources of substantial noise or vibration. Any noise from operations and maintenance at the Gates Substation associated with the

interconnection facilities would not be audible at the nearest sensitive receptors. Thus, noise associated with the Project's operational equipment would result in a less-than-significant impact.

The Project would include no on-site staff, and the Orchard Substation would be remotely monitored by the Applicant's control center, which is staffed by existing employees. Monthly and annual on-site inspection and maintenance activities would be conducted by small specialized teams at the Project site. Such activities would result in a negligible number of vehicle trips that would not be anticipated to have a substantive impact on traffic noise along roadways in the Project vicinity. Inspection and maintenance of the Orchard Substation Facilities would be performed by a small crew of one to two technicians and one to two personnel provided by the equipment vendor, with support provided by the Applicant's staff. Routine maintenance is expected to require approximately six trips per year by crews composed of two to four people. Routine operations would require one or two workers in a light utility truck to visit the Orchard Substation site monthly. It is anticipated that one annual major maintenance inspection of the Orchard Substation would last 1 week, requiring an estimated crew of two to four personnel. Inspection and maintenance-related trips that would be associated with the PG&E Interconnection Facilities of the Project are assumed to be similar to those required for the Orchard Substation Facilities portion of the Project. Considering the small number of infrequent trips associated with the Project's operation, inspection, and maintenance, the Project would be anticipated to have a negligible impact on roadside traffic noise levels in the vicinity.

On-site activities are not anticipated to result in noise levels in excess of existing agricultural and electrical infrastructure operations on the Project site and surrounding properties. Thus, on-site maintenance is not anticipated to result in a substantial increase in noise levels. Finally, the Fresno County Noise Control Ordinance (Section 8.40.060(G)) exempts maintenance activities for private and public utilities from its noise limit standards. Because of the long distance (1.8 miles) separating the nearest sensitive receptor from the Project site, operational noise generated by the Project would attenuate to levels below the ambient noise level at this receptor, resulting in a less-than-significant operational noise impact.

b) Result in generation of excessive groundborne vibration or groundborne noise levels: *Less than Significant.*

Construction

Temporary sources of groundborne vibration and noise during grading, trenching, and other construction activities for the Project would be produced by the operation of heavy construction equipment. The Project equipment types most likely to create vibration include a drill rig, large bulldozers, and loaded trucks.

Vibration levels generated by these pieces of equipment at a reference distance of 25 feet are shown in **Table 3.13-6**. The table also shows the distance at which noise generated by these pieces of equipment attenuate to the FTA's thresholds for building damage and human annoyance at residential uses.

**TABLE 3.13-6
 CONSTRUCTION EQUIPMENT VIBRATION LEVELS**

Construction Equipment	Reference Vibration Level at 25 feet (PPV, in/sec)	Reference Vibration Level at 25 feet (VdB)	Distance to Attenuate to FTA's Threshold for Building Damage (feet)	Distance to Attenuate to FTA's Threshold for Human Annoyance at Residential Uses (feet)
Drill Rig	0.089	87	15	79
Large Bulldozer	0.089	87	15	79
Loaded Trucks	0.076	86	13	73

SOURCE: ESA, 2021 based on FTA, 2018.

As shown in Table 3.13-6, the construction equipment with the highest vibration source level (e.g., a large bulldozer or a drill rig) generates vibration levels of 0.089 PPV in/sec at a distance of 25 feet, while loaded trucks would generate only 0.076 PPV in/sec at 25 feet. Groundborne vibration attenuates rapidly with distance and would not be perceptible beyond 100 feet from the Project boundaries. The FTA's vibration threshold for building damage is 0.2 PPV in/sec, which would not be exceeded even at the reference distance of 25 feet from the highest vibration-generating construction equipment. The FTA's threshold for human annoyance at residential uses is 72 VdB; vibration from construction equipment would attenuate to below this level within 80 feet of the source and would not be perceptible at the nearest residential receptors 1.8 miles away. Because of distance attenuation, Project construction would not have the potential to generate significant short-term groundborne vibration or groundborne noise at the nearest sensitive receptors. Therefore, construction-related vibration and groundborne noise associated with the Project would result in a less-than-significant impact.

Operations and Maintenance

The Project would not include the use of any large rotating equipment during its operation that would introduce any new sources of perceivable groundborne vibration. In addition, operation and maintenance activities at the Project site would not require the use of heavy equipment that would generate high vibration levels. Therefore, the Project has no potential to generate ground vibration levels greater than the 0.2 in/sec or 72 VdB significance criteria for vibration. Thus, operational vibration impacts from the Project would be less than significant.

- c) For a project located with 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, expose people residing or working in the project area to excessive noise levels: *No Impact.***

The Project site is not located within 2 miles of a public airport or public use airport. Therefore, the Project would not expose people working at the site to excessive noise levels from aircraft. There would be no impact.

3.13.5 References

- California Department of Transportation (Caltrans), 1998. *Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol*. October 1998.
- Caltrans, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf>.
- Environmental Science Associates (ESA), 2021. *Ambient Traffic Noise and Construction Equipment and Operational Noise Modelling for the Gates Dynamic Reactive Support Project*. October 2021.
- Federal Highway Administration (FHWA), 2017. *Construction Noise Handbook*. Chapter 9—Construction Equipment Noise Levels and Ranges. Last updated August 24, 2017. Available: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm.
- Federal Transit Administration (FTA), 2018. *Transit Noise and Vibration Impact Assessment*. September 2018. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.
- Fresno County, 1978. Fresno County Code of Ordinances. Chapter 8.40, Noise Control. Available: <http://library.municode.com/index.aspx?clientId=14972>. Accessed September 2021.
- Fresno County, 2000. *Fresno County General Plan, Policy Document*. Available: <https://www.co.fresno.ca.us/home/showdocument?id=18117>
- LS Power Grid California, LLC (LSPGC), 2021. *Proponent Environmental Assessment*. Section 4.13, Noise. Filed February 23, 2021.
- National Electrical Manufacturers Association (NEMA), 1993. Standards Publication No. TR 1-1993—Transformers, Regulators and Reactors (R2000). Available: <https://www.nema.org/Standards/view/Transformers-Regulators-and-Reactors>.
- U.S. Environmental Protection Agency (USEPA), 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March 1974.

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3.14 Population and Housing

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIV. POPULATION AND HOUSING — 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section evaluates the potential for construction, operation, and maintenance of the Project to result in impacts to population and housing in the study area. For the purposes of the evaluation of potential population and housing impacts, the study area was defined as the footprint of all components of the Project including all areas of temporary and/or permanent ground disturbance and the surrounding communities within which the Project would be constructed and operated, as described below.

3.14.1 Environmental Setting

The Project would be constructed within an unincorporated area of Fresno County, directly north of and adjacent to the Pacific Gas and Electric Company (PG&E)–owned Gates Substation. The Project site is located approximately 4 miles southwest of the city of Huron, as shown in Chapter 2, Figure 2-1, *Project Location*. The land surrounding the Project site is primarily used for agriculture purposes with several existing solar facilities located to the southwest.

Population

Projected population data for the city of Huron, Fresno County, and the unincorporated areas within the Fresno County from 2019 to 2050 are presented in Table 3.2-1. Between 2019 and 2050, Fresno County and the city of Huron are expected to experience population increases of 18 percent and 23 percent, respectively.

Table 3.14-1, *Projected Population Growth, 2019–2050*, summarizes projected population growth from 2019 to 2050 for the City of Huron and Fresno County. As demonstrated in the table, the population in the unincorporated area of Fresno County is expected to increase 8 percent over the next 30–35 years.

Housing

Data on the numbers of occupied and vacant housing units and vacancy rates for Fresno County and the city of Huron are presented in **Table 3.14-2, *2018 Housing Data Elements***. Table 3.14-2 depicts housing data for Fresno County and the City of Huron.

**TABLE 3.14-1
 PROJECTED POPULATION GROWTH, 2019–2050**

Area	2019 Population	Projected 2030 Population	Projected 2050 Population	Numeric Change	% Change 2019 - 2050
City of Huron	5,700	6,200	7,030	1,330	23%
County of Fresno, Unincorporated	112,110	116,660	121,220	9,110	8%
Fresno County	1,018,240	1,112,010	1,240,090	221,850	18%

SOURCE: Fresno Council of Governments (FCOG), 2020

**TABLE 3.14-2
 2018* HOUSING DATA ESTIMATES**

Jurisdictional Area	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate (percent)
City of Huron	1,771	512	0	0
County of Fresno, unincorporated	52,424	35444	6,965	19.7%
County of Fresno Total	304,624	160,944	12,673	7.9%

NOTES:

* Most recent available data

SOURCE: FCOG, 2020

3.14.2 Regulatory Setting

Federal/State

No federal or state statutes, regulations, plans, or policies govern population and housing related considerations on the Project site.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Public utilities are directed to consider local regulations and consult with local agencies, but county regulations are not applicable as Fresno County does not have jurisdiction over the Project. Details below that relate to local regulations are provided for informational purposes and to assist with California Environmental Quality Act (CEQA) review.

Fresno County General Plan

The Fresno County General Plan was last updated in 2000 and does not contain any goals, policies, or implementation measures that are applicable to the Project in the context of population and housing.

3.14.3 Applicant Proposed Measures and PG&E Construction Measures

No applicant proposed measures or PG&E construction measures (avoidance and minimization measures or best management practices) have been proposed to address potential effects to population and housing.

3.14.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on population and housing. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities.

Direct and Indirect Effects

- a) **Induce substantial 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): *Less than Significant.***

The Project would not include any new homes or businesses, and so would not directly induce population growth. Construction of access roads or from other infrastructure interior to the Project site would not indirectly induce population growth because these would not be accessible to the public.

Construction of the PG&E Interconnection Facilities would be undertaken either within the substation or PG&E property boundaries (see Section 2.5). No population growth or displacement of housing or residencies would result from the construction or operation of the infrastructure and interconnection upgrades required for the Project.

The Project could have an indirect impact on population growth in the study area if it resulted in an increase in local population due to the workforce associated with the Project. Considerations for worker numbers and construction timeline are discussed in Chapter 2, *Project Description*. LSPGC (LS Power Grid California, LLC) expects the Project's labor demands during the 22-month construction period would be met by existing LSPGC employees, by hiring specialty construction and electrical contractors who already reside in the surrounding areas, or by hiring specialty construction and electrical contractors from outside the local area who may temporarily reside in the vicinity during the construction phase. LSPGC estimates that the Project would require a maximum of 20 construction workers during peak construction, which would not result in a need for substantial number of workers to relocate to the area. Given the small number of positions required for construction of the Project and the anticipated short-term construction period, the Project would have a less-than-significant indirect impact on population growth associated with the Project's temporary workforce.

Furthermore, the Project would not induce population growth or create new demand for housing, as the facility would support the existing regional transmission system and would not provide additional power generation capacity that could stimulate local population growth. Accordingly, the Project would have a less-than-significant indirect impact on population growth associated with extension of infrastructure.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere: *No Impact*.

The Project would not displace any existing residents or housing, as Project facilities and associated interconnection transmission lines would be located on vacant and agricultural lands, absent of people and existing housing developments or residences. Additionally, there are no approved or pending housing developments within 1 mile of the Project (LSPGC, 2021). The construction, operations, and maintenance workforce for this Project is expected to be minimal as discussed above.

No people or housing would be displaced by construction or operation of the Project. Therefore, it would not be necessary to construct replacement housing elsewhere and there would be no impact under this criterion.

3.14.5 References

Fresno County, 2000. Fresno County General Plan Housing Element. Adopted October 3, 2000. Accessed April 23, 2021. Available at <https://www.co.fresno.ca.us/home/showdocument?id=18117>.

Fresno County Council of Governments (FCOG), 2020. Fresno County 2019-2050 Growth Projections. Accessed September 21, 2021. Available at https://2ave31244ex63mgdyc1u2mfp-wpengine.netdna-ssl.com/wp-content/uploads/2021/04/Fresno-COG-2019_2050-Projections-Final-Report-040921.pdf.

LS Power Grid California, LLC (LSPGC), 2021. Proponent Environmental Assessment: Section 4.14.1.3, Population and Housing. Filed February 23, 2021.

3.15 Public Services

<u>Issues:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
XV. PUBLIC SERVICES —				
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 following public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

The study area for the analysis of potential impacts on public services is defined to include the service areas of fire protection, law enforcement services, schools, parks, library, and medical providers that would serve the Project.

Fire Protection

Fire protection services in the vicinity of the Project site are provided by the Fresno County Fire Protection District (FCFPD). The FCFPD serves a population of more than 220,000 in a service area encompassing approximately 2,655 square miles in the communities of Tarpey Village, Calwa, Easton, Malaga, Del Rey, Caruthers, San Joaquin, Tranquillity, Prather, Friant, Tollhouse, Wonder Valley, Cantua Creek, Three Rocks, Five Points, Centerville, Tivy Valley, and Sand Creek and the cities of San Joaquin, Parlier, Mendota, and Huron. The FCFPD provides a full range of emergency response services, which include structural and wildland fire suppression, response to hazardous materials incidents, search and rescue, technical rescue, vehicle extrication, and basic life support medical services. A total of 48 firefighters are on duty daily for emergency response. FCFPD emergency response personnel respond to over 14,700 incidents annually, of which approximately 68 percent are medical incidents (FCFPD 2021a, 2021b). The FCFPD’s emergency response time on average is within 4 minutes (FCFPD 2018). Minimum daily staffing includes one Duty Chief, three Battalion Chiefs, 13 apparatus with two personnel each, one engine with three fire personnel, and one ladder truck with three fire personnel (FCFPD 2020).

The nearest fire station to the Project site is Station 93, located approximately 4 miles northeast of the Project site at 36421 S. Lassen Avenue in the community of Huron (FCFPD 2021c).

Police Services

The Fresno County Sheriff's Office (FCSO) patrol services are divided into four patrol areas, each commanded by a lieutenant who supervises field services from a substation located in each of the areas.

The Project site is located within Patrol Area 1. The Area 1 substation is located at 21925 West Manning Avenue in the City of San Joaquin, approximately 40 miles north of the Project site via Lassen Avenue. Area 1 encompasses more than 2,400 square miles and serves the unincorporated communities of Tranquillity, Biola, Five Points, Helm, Three Rocks, Cantua Creek, and Dos Palos, as well as the City of San Joaquin (contracted) (FCSO 2021a, 2021b).

Schools

The Project site is located within the Coalinga-Huron Unified School District (CHUSD), which includes one kindergarten, four elementary schools, two middle schools, and one high school. CHUSD also includes continuation schools and independent study options (Fresno County Superintendent of Schools 2021; CHUSD 2021). The District serves over 5,000 students throughout the cities of Coalinga and Huron in Fresno County.

Libraries

Libraries nearest to the Project site include Coalinga Huron District Library, Lemoore Branch Library, and Hanford Branch Library. Coalinga Huron District Library is located approximately 13 miles from the Project site. Both the Lemoore Branch Library and the Hanford Branch Library are located within 30 miles of the Project site.

Parks

The County offers a variety of recreational opportunities including regional parks, city parks, state and national parks, national forests, wilderness areas, scientific research areas, and other recreational opportunities. The Project site is not located within the immediate vicinity of any parks or recreational facilities, and there no parks or existing recreational facilities located on the Project site, as discussed further in Section 3.2.16, *Recreation*.

Emergency Medical Services

The nearest hospital to the Project site is the Coalinga Regional Medical Center, located within the city of Coalinga, approximately 12 miles from the Project site. The Coalinga Regional Medical Center includes acute care, clinical lab, as well as emergency services that are provided 24 hours per day (Coalinga Regional Medical Center, 2014). The next nearest hospital is Naval Health Clinic, located in the city of Lemoore approximately 15 miles from the Project site. Medical services include primary and preventative care; hospital care and surgery services urgent and emergency care; as well as specialty and other care (Naval Health Clinic 2021). The next nearest medical service centers are Adventist Health Hanford and Adventist Health Tulare.

3.15.2 Regulatory Setting

Federal

No federal statutes, regulations, or policies apply to the analysis of public services for the Project.

State

California Public Resources Code Sections 4292 and 4293

Details on the relevant fire regulations are provided in Section 3.20, *Wildfire*.

Red Flag Fire Warning and Weather Watches

Similar to PRC Sections 4292 and 4293 (discussed in Section 3.20), red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red flag warnings and fire weather watches, and CAL FIRE provides safety recommendations for preventing fires. These include clearing and removing vegetation and ensuring the proper use of equipment.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Details below that relate to local regulations are provided for informational purposes.

Fresno County General Plan

The Public Facilities and Services Element of the County General Plan contains goals, policies, and implementation program measures to ensure public facilities and services are adequately available and accessible in a timely fashion to serve new development (Fresno County 2000).

The following goals and policies within Section G, *Law Enforcement*, of the Public Facilities and Services Element, may be relevant to the Project:

Goal PF-G. To protect life and property by deterring crime and ensuring the prompt and efficient provision of law enforcement service and facility needs to meet the growing demand for police services associated with an increasing population.

Policy PF-G.2: The County shall strive to maintain a staffing ratio of two (2) sworn officers serving unincorporated residents per 1,000 residents served. (This count of officers includes all ranks of deputy sheriff personnel and excludes all support positions and all sworn officers serving county wide population interests such as bailiffs, and sworn officers serving contract cities and grant specific populations).

The following goals, policies, and implementation programs within Section H, *Fire Protection and Medical Services*, of the Public Facilities and Services Element, are relevant to the Project:

Goal PF-H. To ensure the prompt and efficient provision of fire and emergency medical facility and service needs, to protect residents of and visitors to Fresno County from injury and loss of life, and to protect property from fire.

Policy PF-H.1: The County shall work cooperatively with local fire protection districts to ensure the provision of effective fire and emergency medical services to unincorporated areas within the county.

Policy PF-H.2: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in unincorporated areas of the County shall not be approved unless adequate fire protection facilities are provided.

Policy PF-H.8: The County shall encourage local fire protection agencies in the county to maintain the following as minimum standards for average first alarm response times to emergency calls:

- a. 5 minutes in urban areas;
- b. 15 minutes in suburban areas; and
- c. 20 minutes in rural areas.

Policy PF-H.10: The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the Uniform Fire Code and other State and local ordinances.

Policy PF-H.11: The County shall encourage local fire protection agencies to provide and maintain advanced levels of emergency medical services (EMS) to the public, consistent with current practice.

The following goals, policies, and implementation programs within Section I, *Schools and Library Facilities*, of the Public Facilities and Services Element, are relevant to the Project:

Goal PF-I. To provide for the educational needs of Fresno County and provide libraries for the educational, recreational, and literary needs of Fresno County residents.

Policy PF-I.1: The County shall encourage school districts to provide quality educational facilities to accommodate projected student growth in locations consistent with land use policies of the General Plan.

Policy PF-I.4: The County shall work cooperatively with school districts in monitoring housing, population, and school enrollment trends and in planning for future school facility needs and shall assist school districts in locating appropriate sites for new schools.

The following goals, policies, and implementation programs within Section H, *Schools and Library Facilities*, of the Open Space and Conservation Element, are relevant to the Project:

Policy OS-H.2: The County shall strive to maintain a standard of five (5) to eight (8) acres of County-owned improved parkland per one thousand (1,000) residents in the unincorporated areas.

3.15.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following applicant proposed measures (APMs) are proposed by the Applicant to address potential impacts on public services.

- **APM PS-1:** LSPGC would coordinate construction activities with local law enforcement and fire protection agencies. Emergency service providers would be notified of the timing, location, and duration of construction activities.
- **APM HAZ-4:** LSPGC shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. Although the Proposed Project area is not located within an area designated as a Very High or High Fire Hazard Severity Zone, LSPGC will prepare a Construction Fire Prevention Plan prior to construction.

All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.

Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks, fire extinguishers, and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.

PG&E Construction Measures

PG&E would implement the following avoidance and minimization measures (AMMs) to address potential effects on public services. No best management practices are directly applicable to the discussion of impacts.

- **AMM-7:** In areas of high risk of wildlife electrocution, use insulated jumper wires, animal guards for equipment insulator bushings, or construct lines to follow the Bird and Wildlife Protection Standards.
- **AMM-8:** During fire season in SRAs, carry backpack water sprayers and shovels in all vehicles; during red flag conditions curtail welding, carry a large fire extinguisher on each fuel truck, and clear parking and storage areas of flammable materials.

3.15.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on public services. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities, and incorporates the APMs for the Orchard Substation Facilities and AMMs, as applicable for the PG&E Interconnection Facilities.

Direct and Indirect Effects

a.i) 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 fire protection: *No Impact.*

No new or physically altered fire or police facilities are proposed as part of the Project, nor would the Project result in an increase in population that would require the provision of new or physically altered fire or police facilities, because no housing is proposed as part of the Project and there would be no permanent staffing associated with the operations and maintenance (O&M) at the Project site. Construction workers would not create a substantial increase in population typically associated with impacts under this criterion.

Increased traffic in the Project vicinity could temporarily affect the demand for fire protection, police, and emergency response services if motor vehicle accidents were to occur or if construction activities were to ignite a fire that required an emergency response. However, vehicle use of area roadways resulting from Project construction activities would be temporary (anticipated 22 months) and the increase in demand is not expected to be significant, therefore it would not affect the FCFD's ability to respond to incidents within the recommended time periods described in General Plan Policy PF-H.8. Furthermore, the Applicant would ensure work areas would be cleared or trimmed of vegetation before staging construction equipment, thus minimizing the probability of a fire during construction. Construction lane or road closures would be temporary and would be coordinated with local jurisdictions and emergency service providers, and traffic control would be

implemented, as necessary and described in **APM PS-1**. APM HAZ-4 and AMM-8 (applicable to PG&E facilities) discuss fire prevention measures, such as the Applicant's commitment to preparing a Construction Fire Prevention Plan prior to construction, and PG&E protocols during fire season. These measures stipulate having fire suppression equipment readily available on all construction vehicles for construction and maintenance personnel. The implementation of fire prevention methods as described in APM HAZ-4 would further reduce the chance of fire and therefore reduce increase in demand for fire protection services.

In addition to APM PS-1, security measures through the Applicant's control center and staff would be taken that would reduce the potential for the need for police services. Perimeter security fencing would be installed around the outer limits of the work area. Lighting would also be installed for security purposes during construction. Construction crews would lock up and secure each worksite to prevent theft or vandalism associated with work equipment or supplies at the completion of each workday. Once built, the permanent perimeter physical security system would consist of an 8-foot chain link security fence with an additional 1-foot barbed wire extension at the top. The Static Synchronous Compensator (STATCOM) physical security would be designed in accordance with North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) requirements with 24/7 monitoring, response, and control through the LSPGC control center and staff. The perimeter security fence would have two gates integrated with electronic access card readers, including indoor and outdoor physical security cameras placed throughout the site with at least two of the cameras placed around the exterior of the control house. The security cameras would be routed through a network video recorder located in the Wide Area Network (WAN) control panel and communicated to the LSPGC control center for monitoring. APM PS-1 and the additional security measures would reduce the need for police services.

PG&E would implement specific measures AMM-7 and AMM-8 to directly and indirectly reduce the risk of wildfire (applicable to PG&E facilities). Fire, emergency, and police services currently serve, and would continue to serve, the areas in which the existing PG&E Gates Substation and solar field and the Project are located.

Adverse impacts that would require the provision of new or altered schools, libraries, recreation, and hospitals, are typically associated with an increase in population. As previously mentioned, no housing is proposed as part of the Project, the nature of the Project would not directly or indirectly contribute to population growth, and neither the temporary construction workforce nor staffing for O&M activities would result in substantial population growth. Therefore, there would be no impacts on these public services as a result of the Project.

3.15.5 References

Coalinga-Huron Unified School District (CHUSD), 2021. Schools. Available at <http://www.chusd.org/schools/>. Accessed April 9, 2021.

Coalinga Regional Medical Center, 2014. Hospital Services. Available at <http://coalingamedicalcenter.com/hospital-services/>. Accessed April 22, 2021.

Fresno County, 2000. Fresno County General Plan. October 3, 2000. Available at <https://www.co.fresno.ca.us/home/showpublisheddocument?id=18117>. Accessed April 9, 2021.

Fresno County Fire Protection District (FCFPD), 2018. Fresno County Fire Department Annual Report. 2018. Available at https://www.fresno.gov/fire/wp-content/uploads/sites/6/2019/01/FFDAnnualReport18_7.pdf. Accessed September 29, 2021.

FCFPD, 2019. Fresno County Fire Protection District FY 2020/2021, Budget Preliminary. Available at https://www.fresnocountyfire.org/wp-content/uploads/2020/06/Approved-FY-20-21-Preliminary-Budget-6_17_2020.pdf. Accessed April 9, 2021.

FCFPD, 2021a. About Us. Available at <https://www.fresnocountyfire.org/our-department/>. Accessed April 9, 2021.

FCFPD, 2021b. District Operations. Available at <https://www.fresnocountyfire.org/stations-and-functions/#district-operations>. Accessed April 9, 2021.

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FCSO, 2021b. Area 1. Available at <https://www.fresnosheriff.org/area-1.html>. Accessed April 9, 2021.

Fresno County Superintendent of Schools, 2021. Office of Education. Available at <https://fcoe.org/office-education>. Accessed April 9, 2021.

Naval Health Clinic, 2021. Health Services. Available at <https://lemoore.tricare.mil/Health-Services>. Accessed April 22, 2021.

3.16 Recreation

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVI. RECREATION —				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 Environmental Setting

Recreational opportunities within Fresno County include regional parks, city parks, state and national parks, national forests, wilderness areas, scientific research areas, and other facilities. There are no recreational resources within the Project site or within 3 miles; the majority of recreational resources are located within the eastern portion of the County (Fresno County 2000). **Table 3.16-1** provides a list of the recreational facilities within 15 miles of the Project site.

**TABLE 3.16-1
RECREATION FACILITIES WITHIN 15 MILES OF THE PROJECT SITE**

Recreational Facility	Managing Agency	Approximate Distance from Project Site
Keenan Park	Coalinga-Huron Recreation and Park District	4 miles northeast
Chestnut Park	Coalinga-Huron Recreation and Park District	5 miles northeast
George E. Olsen Memorial Park	Coalinga-Huron Recreation and Park District	12 miles east
Keck Park	Coalinga-Huron Recreation and Park District	14 miles east
Coalinga-Huron Sports Complex	Coalinga-Huron Recreation and Park District	13 miles east
Huron Fishing Access	Fresno County	8 miles northeast

SOURCES: Coalinga-Huron Recreation and Park District 2021; Fresno County 2021

Federal Recreation Resources

There is no land under federal management or ownership within 25 miles of the Project site. The closest federal recreational site is the Curry Mountain Recreation Area, located approximately 26 miles southwest of the Project site.

State Recreation Resources

There are no state recreation areas on or within several miles of the Project site. The nearest state park to the Project site is Colonel Allensworth State Historic Park, located in unincorporated

Tulare County approximately 46 miles southeast of the Project site (California Department of Parks and Recreation, 2021).

Local Recreation Resources

There are a variety of recreational resources within Fresno County including regional parks, state parks, national parks, national forests, and wilderness areas. Primary responsibility for the development and maintenance of the County park system lies upon the County's General Services Department. The local parks nearest to the Project site are identified in Table 3.2-1.

3.16.2 Regulatory Setting

Federal/State

No federal or state statutes, regulations, plans, or policies govern recreation-related considerations on the Project site.

Local

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Details below that relate to local regulations are provided for informational purposes.

Fresno County General Plan

The Fresno County General Plan *Open Space and Conservation Element* discusses policies to enhance recreational opportunities in the county by encouraging further development of public and private recreational opportunities. One policy within *Section H, Parks and Recreation*, provides a quantitative goal for the provision of parkland:

Goal OS-H: To designate land for an promote the development and expansion of public and private recreational facilities to serve the needs of residents and visitors.

Policy OS-H.2: The County shall strive to maintain a standard of five (5) to eight (8) acres of County-owned improved parkland per one thousand (1,000) residents in the unincorporated areas.

Policy OS-H.6: 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 join-use agreements whenever possible.

Policy OS-H.14: The County shall encourage the development of recreation facilities in western Fresno County.

3.16.3 Applicant Proposed Measures and PG&E Construction Measures

No applicant proposed measures or PG&E construction measures (avoidance and minimization measures or best management practices) have been proposed to address impacts on recreational resources.

3.16.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on recreational resources. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities.

Direct and Indirect Effects

- 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: *No Impact.***

Increases in use of recreational facilities typically are associated with substantial increases in population or a substantial reduction in the availability of existing parks or other recreational facilities. As highlighted in Section 3.14, *Population and Housing*, the Project would not result in any substantial population growth within the area. The Project site is not located within or adjacent to a residential area, or within several miles of any parks or recreational facilities, and there are no parks or existing recreational facilities located on the site. Therefore, the Project would not result in a substantial increase in the existing demand for parks and recreation-related facilities and no deterioration of any recreational facilities would occur. There would be no impact under this criterion.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment: *No Impact.***

The Project would not include the construction of any recreational facilities. There would be no impact under this criterion.

3.16.5 References

Bureau of Land Management, 2021. Curry Mountain. Available at <https://www.blm.gov/visit/curry-mountain>. Accessed April 22, 2021.

California Department of Parks and Recreation, 2021. Colonel Allensworth State Historic Park. Available at https://www.parks.ca.gov/?page_id=583. Accessed April 22, 2021.

Coalinga-Huron Recreation and Park District, 2021. Parks and Facilities. Available at <https://chrpd.org/parks/>. Accessed April 22, 2021.

Fresno County, 2021. Resources and Parks Division, Parks. Available at <https://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/resources-and-parks-division/parks>. Accessed April 22, 2021.

3.17 Transportation

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVII. TRANSPORTATION — Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

There are no bicycle, pedestrian, transit, or rail facilities in the vicinity of the Project site. There are also no dedicated transit routes that provide service to the Project area. The nearest airfield to the Project site is the New Coalinga Municipal Airport, located approximately 12 miles west of the Project site. The Project would not be anticipated to result in any impacts on these facilities. Impacts would be anticipated to be limited to roadway facilities, which are described below.

Roadway Network

For the purposes of this analysis, the study area is defined as the area bounded by Interstate 5 (I-5) to the south and west, West Phelps Avenue to the north, and State Route (SR) 269/South Lassen Avenue to the east.

Regional transportation in the study area is facilitated primarily by I-5 and SR 41. I-5 is the primary regional travel facility. I-5, located approximately 1.5 miles west of the Project area, is a major north-south route of the Interstate Highway System that carries traffic along the West Coast of the United States from the Canadian border to the Mexican border. SR 269 runs north/south from SR 145, approximately 20 miles north of the Project site, to SR 33, approximately 10 miles to the south. SR 41 runs northeast/southwest approximately 13.5 miles east of the Project site. These roadways, under the jurisdiction of the California Department of Transportation (Caltrans), would be used to access the Project site during construction and operation.

The local transportation system in the study area includes roads maintained by the Fresno County. The Project site would be accessed via West Jayne Avenue. West Jayne Avenue can be directly accessed via the three regional facilities noted above (a full-access interchange at I-5 and intersections at SR 269 and SR 41).

3.17.2 Regulatory Setting

State

California Department of Transportation

Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Fresno County is under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to potential transportation and traffic impacts of the Project:

California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load).

Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Streets and Highways Code, Sections 660–711 and 670–695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Regional

The CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; therefore, the Project is not subject to local discretionary regulations. Details below that relate to regional regulations are provided for informational purposes.

Fresno County General Plan

The study area's roadway system is under the jurisdiction of Fresno County. The Transportation and Health and Safety Elements of the Fresno County General Plan provide the following goals and policies that are relevant to the transportation context of the Project:

Goal TR-A. To plan and provide a unified, coordinated, and cost-efficient countywide street and highway system that ensures the safe, orderly, and efficient movement of people and goods.

Policy TR-A.3. The County shall require that new or modified access to property abutting a roadway and to intersecting roads conform to access specifications in the Circulation Diagram and Standards section. Exceptions to the access standards may be permitted in the manner and form prescribed in the Fresno County Zoning and Subdivision Ordinances, provided that the designed safety and operational characteristics of the existing and planned roadway facility will not be substantially diminished.

Policy TR-A.5. The County shall require dedication of right-of-way or dedication and construction of planned road facilities as a condition of land development, and require an analysis of impacts of traffic from all land development projects including impacts from truck traffic. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefit to others through traffic impact fees.

Policy TR-A.7. The County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system.

Policy TR-A.8. The County shall ensure that land development that affects roadway use or operation or requires roadway access to plan, dedicate, and construct required improvements consistent with the criteria in the Circulation Diagram and Standards section of this element.

Goal HS-B. To minimize the risk of loss of life, injury, and damage to property and natural resources resulting from fire hazards.

Policy HS-B.5. The County shall require development to have adequate access for fire and emergency vehicles and equipment. All major subdivisions shall have a minimum of two (2) points of ingress and egress.

Fresno Council of Governments Regional Transportation Plan

The 2018 Regional Transportation Plan (RTP) was prepared by the Fresno Council of Governments (COG) and was adopted in June 2017. An update to the RTP is currently underway; it is expected to be completed in 2022. The RTP is a blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Fresno County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state, and federal agencies. Additionally, the RTP establishes a basis on which funding applications are evaluated. Use of any state or federal transportation funds by local governments must conform to the RTP, the State Implementation Plan for air quality improvements, and the Federal Transportation Improvement Programs.

Fresno COG prepared the 2018 RTP to include a sustainable communities strategy, which is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from automobiles and light trucks. The sustainable communities strategy is required by Senate Bill 375, which went into effect in 2009 (Fresno COG 2017a).

Council of Fresno County Governments Congestion Management Process

All urbanized areas with a population larger than 200,000 people are required to have a congestion management system, program, or process. Fresno COG refers to its congestion management activities as the Congestion Management Process (CMP). The 2009 Fresno County CMP was designed to meet the federal requirement under Code of Federal Regulations Title 23, Sections 500.109 and 450.320. The 2017 CMP is an update to the 2009 CMP based on emerging transportation planning practices, such as the transportation performance measurement required under the Moving Ahead for Progress in the 21st Century Act and the Fixing America's Surface Transportation (Fresno COG 2017b).

The CMP is a systematic process for managing congestion that provides information on (1) transportation system performance and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The purpose of the CMP is to help ensure that a balanced transportation system is developed that

relates population growth, traffic growth, and land use decisions to transportation system level of service (LOS) performance standards and air quality improvement. The CMP is an effort to more directly link land use, air quality, transportation, and the use of new advanced transportation technologies as an integral and complementary part of the region's plans and programs. The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all state highways (e.g., SR 269) and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways.

As discussed below under impact b), CEQA Guidelines Section 15064.3(b) was adopted in December 2018. It requires lead agencies to evaluate transportation impacts based on a vehicle miles traveled (VMT) approach, and no longer allows the use of vehicle delay and LOS to determine the significance of a transportation impact for purposes of CEQA. Because the CMP is solely focused on vehicle delay and LOS transportation metrics, it is not the focus of the analysis of transportation impacts in this initial study.

3.17.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The Project includes applicant proposed measures (APMs) that would be implemented to reduce one or more transportation-related impacts:

- **APM GHG-1:** The following measures shall be implemented to minimize greenhouse gas emissions from all construction:
 - If suitable park-and-ride facilities are available in the Project vicinity, construction workers shall be encouraged to carpool to the job site.
 - Demolition debris shall be recycled for reuse to the extent feasible.
- **APM TRA-1:** LSPGC would prepare a Traffic Control Plan to describe measures to be taken to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LSPGC would follow its standard safety practices as needed, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LSPGC would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for obtaining a local encroachment permit, LSPGC would establish a Traffic Management Plan (TMP) to address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Construction activities would be coordinated with local law enforcement and fire protection agencies. Emergency service providers would be notified as required by the local permit of the timing, location, and duration of construction activities.

PG&E Construction Measures

No PG&E construction measures (avoidance and minimization measures or best management practices) would be implemented to address impacts on transportation resources.

3.17.4 Environmental Impacts and

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on transportation resources. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities, and incorporates APMs to reduce effects.

Direct and Indirect Effects

- a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities: *Less than Significant.***

As described in Section 3.17.1, *Environmental Setting*, there are no bicycle, pedestrian, rail facilities, or transit routes in the vicinity of the Project site. Therefore, no impact would occur related to these modes of transportation. Project transportation impacts would be specific to vehicular trips, which would be associated with Project construction and operations.

Construction

Construction of the Project would have temporary effects on traffic and transportation facilities around the Project area, resulting from an increase in vehicle trips, which would consist of haul trips to transport materials to and from the Project site, transport of construction equipment, and access to the Project site by construction workers' personal vehicles. Construction-related traffic would access the Project site via West Jayne Avenue, where private roadways and easements would be used to provide direct access to and from the Project site.

As described in Chapter 2, Section 2.7.16, *Construction Workforce, Equipment, Traffic and Schedule*, peak construction would be anticipated to include 20 workers, with worker trips primarily anticipated to originate from the greater Fresno area. It is anticipated that additional maintenance and/or delivery trucks would travel to and from the staging areas up to four times per week during peak activities. The total maximum daily vehicle trips (i.e., round trips) during this period would be approximately 45 trips per day, consisting of approximately 25 truck trips and 20 worker trips. Maximum daily truck trips are anticipated to include approximately 18 dump trucks (14 rock deliveries and 4 excess material haul off), four water trucks, and three equipment delivery trucks.

The anticipated haul trips would be spaced out during the day and would not interfere with commuter traffic in the morning and evening, but would temporarily increase the number of vehicles accessing the Project area. These effects would be short-term and temporary, with peak

vehicle trips anticipated to occur from March 2022 through August 2022 and off-peak vehicle trips occurring from September 2022 to December 2023. The vehicle trips would be limited to predesignated routes to minimize the contribution of Project construction traffic to roadway congestion in the Project area.

The construction plan for the Project would be designed and scheduled so that construction would not require the closure of any roadways. However, as described in Chapter 2, *Project Description*, Project construction would be anticipated to require the temporary closure of one travel lane on West Jayne Avenue, for telecommunications-related construction activities. Because ingress and egress of truck traffic would occur from a County-maintained roadway, a Fresno County Traffic Control Permit and traffic control plan may be required. The proposed traffic control plan implemented pursuant to APM TRA-1 (see Table 2-8 in Chapter 2) would include measures to control construction traffic-related impacts associated with the Project, so as to minimize traffic congestion and potential vehicular conflicts and maintain traffic safety, in accordance with County policies. To reduce construction worker vehicle trips, APM GHG-1 includes a provision to encourage construction workers to utilize suitable park-and-ride facilities and carpool to the Project site. The implementation of these measures as part of the Project would be anticipated to limit roadway congestion and maintain traffic safety, in compliance with local, state, and federal policies and regulations related to transportation.

With the implementation of APM TRA-1 and APM GHG-1, construction-related transportation impacts would not be anticipated to conflict with relevant federal, state, and local transportation policies, plans, and standards, and the resultant impact would be less than significant.

Activities associated with PG&E infrastructure improvements would likely use equipment similar to that used to construct the Orchard Substation Facilities. Similar to the Orchard Substation portion of the Project, these activities would generate vehicle trips associated with transportation of supplies, equipment, and construction workers to and from the PG&E Gates Substation site. Because of the shorter duration of construction activities associated with the PG&E upgrades, the impact would also be less than significant.

Operations and Maintenance

Project operations and maintenance would result in minor roadway impacts. The Project would include no on-site staff to operate or maintain the Orchard Substation. Monthly and annual on-site inspection and maintenance activities would be conducted by small, specialized teams at the Project site, resulting in a negligible number of vehicle trips, that would not be anticipated to result in any noticeable change to traffic conditions on roadways in the Project vicinity.

Inspection and maintenance would be performed by a small crew of one to two high-voltage technicians and one to two personnel provided by the equipment vendor, with support provided by the Applicant's staff. Routine maintenance is expected to require approximately six trips per year by crews composed of two to four people. Routine operations would require one or two workers in a light utility truck to visit the Project site monthly. It is anticipated that one annual major maintenance inspection would occur, requiring an estimated crew of two to four personnel. This inspection would take approximately 1 week to complete. As discussed in Chapter 2, Section 2.6.3, the Gates Substation upgrades and interconnection facilities related to the Project

would not result in a measurable increase in maintenance requirements or the addition of personnel. Therefore, with respect to VMT considerations, the PG&E Gates Substation would be maintained and operated as under existing conditions. With consideration of the frequency at which these teams would visit the Project site, Project operations would be anticipated to have a negligible impact on local and regional roadways and to not conflict with relevant federal, state, and local transportation policies, plans, and standards, and would have a less-than-significant impact under that criterion.

**b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b):
*Less than Significant.***

As noted in CEQA Guidelines Section 15064.3(a), “For the purposes of this section, ‘vehicle miles traveled’ refers to the amount and distance of automobile travel attributable to a project,” where, in accordance with guidance provided by the Governor’s Office of Planning and Research, automobiles refer to on-road passenger vehicles, specifically cars and light trucks (OPR 2018). While heavy vehicles need not be included in the VMT analysis based on the CEQA Guidelines, they nonetheless were included in this analysis, resulting in a conservative estimate of Project-generated VMT.

Fresno County adopted transportation significance thresholds and screening criteria based on VMT in July 2020 (Fresno COG 2020). According to the guidance, a detailed transportation VMT analysis is required for all land development projects, except those that meet one of four designated screening criteria. A project that meets at least one of the screening criteria would be presumed to result in a less-than-significant VMT impact due to the project characteristics and/or location. The Project would meet the trip generation screening criterion, which states that a project generating fewer than 500 average daily trips (ADT) would result in a less-than-significant VMT impact.

As described above, the PG&E Interconnection would not result in a need for increased maintenance or additional personnel; the Project would include no on-site staff, and vehicle trips associated with Project operations and maintenance would be limited to monthly and annual on-site inspection and maintenance activities conducted by small, specialized teams at the Project site, resulting in less than 1 ADT. As described in the previous impact discussion, Project construction would generate a maximum of 90 ADT (45 round trips). Therefore, the Project construction and operations and maintenance phases would generate substantially fewer than 500 average daily trips, meeting the screening criteria to be considered a less-than-significant VMT impact.

**c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment):
*Less than Significant.***

The Project does not include improvements to transportation facilities accessible to the public. The Project includes construction of new private access roads that would be accessed from West Jayne Avenue, and provide access to and from the Project site. Those facilities would be designed in accordance with all relevant Fresno County roadway design standards. Thus, the Project would

not increase hazards on existing roadway facilities related to transportation improvements. The Project would expand energy utility–related uses in the Project area, adjacent to existing energy utility uses. Therefore, the Project would not construct a land use that would be incompatible with existing land uses in the Project area. This impact would be less than significant.

d) Result in inadequate emergency access: *Less-than-Significant Impact*.

The Project would neither include nor require improvements to the transportation system. As described in Chapter 2, *Project Description*, it is not anticipated that construction-related activities required for the new permanent access road or access roads to be improved would result in lane closures of the public road, West Jayne Avenue. However, it is anticipated that intermittent closure of one lane on West Jayne Avenue would be required for telecommunications–related construction activities. Temporary closure of one lane along West Jayne Avenue may have the potential to affect emergency access by creating congestion during temporary lane closures. Because ingress and egress of truck traffic would occur from a County-maintained roadway, a Fresno County Traffic Control Permit and traffic control plan may be required. Implementation of the proposed traffic control plan, pursuant to APM TRA-1 (see Table 2-8 in Chapter 2), would reduce traffic-related impacts associated with the Project, so that emergency access would be maintained during Project construction. The Project would construct an alternative exterior access road to provide primary access to the Project site, and would have a secondary emergency egress route available. For this reason, the Project would not result in inadequate emergency access, and such impacts would be less than significant.

3.17.5 References

Fresno Council of Governments, 2021. *Fresno County SB 743 Implementation Regional Guidelines*. January 2021. Available at https://2ave31244ex63mgdyc1u2mfp-wpengine.netdna-ssl.com/wp-content/uploads/2021/01/Fresno-COG-VMT-Report_01-08-2021.pdf. Accessed September 26, 2021.

Fresno County, 2000. Fresno County General Plan, Policy Document. Available: <https://www.co.fresno.ca.us/home/showdocument?id=18117>

3.18 Tribal Cultural Resources

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVIII. TRIBAL CULTURAL RESOURCES —				
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), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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. 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.18.1 Environmental Setting

Section 3.5, *Cultural Resources*, provides a summary of the prehistoric and ethnographic context of the Project study area and a summary of the cultural resources studies completed for the Project.

To determine the tribal cultural resources sensitivity of the Project study area, PanGIS submitted a Sacred Lands File (SLF) request to the Native American Heritage Commission (NAHC) on June 30, 2020. The NAHC responded on July 1, 2020, with a list of 13 representatives from 10 tribes. PanGIS sent non-statutory tribal outreach letters or emails to the tribal representatives on July 1, 2020. On July 2, 2020, Big Sandy Rancheria Tribal Chairperson Elizabeth D. Kipp wrote that they have no comment on the Project, but would like to be notified of any cultural resources discoveries. On July 29, 2020, Tribal Liaison Dirk Charley said that the Proposed Project is outside the area of interest of the Dunlap Band of Mono Indians, and they defer to a closer tribe.

On July 8, 2020, Dumna Wo-Wah Tribal Government Chairman Robert G. Ledger Sr. replied by email and provided confidential tribal knowledge that indicates the potential for buried artifacts in the Proposed Project study area and vicinity. Mr. Ledger requested a monitor on site during ground-disturbing activities in the study area and official consultation regarding the Proposed Project.

3.18.2 Regulatory Setting

Federal

No federal regulations specifically related to tribal cultural resources are applicable to the Project.

State

Public Resources Code

In September 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the California Public Resources Code (PRC) regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, the PRC now requires lead agencies to analyze project impacts on “tribal cultural resources” separately from archaeological resources (PRC Sections 21074 and 21083.09). The PRC also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Sections 21080.3.1, 21080.3.2, and 21082.3).

Specifically, PRC Section 21084.3 states:

- a) Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.
- b) If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in Section 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:
 - 1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - 2) 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:
 - (A) Protecting the cultural character and integrity of the resource.
 - (B) Protecting the traditional use of the resource.
 - (C) Protecting the confidentiality of the resource.
 - 3) 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.
 - 4) Protecting the resource.

Native American Heritage Commission

The NAHC identifies and manages a catalog of places of special religious or social significance to Native Americans. This database, known as the SLF, is a compilation of information on known graves and cemeteries of Native Americans on private lands and other places of cultural or

religious significance to the Native American community. The NAHC also performs other duties regarding the preservation and accessibility of sacred sites and burials and the disposition of Native American human remains and burial items.

CPUC Tribal Consultation Process

The CPUC has two concurrent processes for tribal outreach: one for tribal entities that have requested AB 52 consultation from CPUC and one for non-statutory tribal outreach.

AB-52 Consultation

The AB 52 consultation process begins with CPUC's AB 52 Tribe Master list. The list is reviewed to determine which tribes (if any) are affiliated with the region where the project is proposed. An AB 52-compliant consultation letter is drafted and sent to the identified AB 52 tribal representatives. Tribal representatives have 30 days to respond to the AB 52 consultation letters. No tribes were identified on the CPUC's AB 52 Tribe Master list within Fresno County. Therefore, no AB 52 consultation is required.

Non-statutory Tribal Outreach

The non-statutory tribal outreach begins with a SLF request to the NAHC for list of tribes. A courtesy outreach letter is prepared and sent to the identified tribal representatives. Non-statutory tribal outreach is not required and CPUC has no obligation to notify non-AB 52 tribes, but this kind of outreach encourages a positive and trusting relationship and a better understanding of potential impacts proposed projects may have on tribal cultural resources (Gordon and Chang, 2015).

Local

No local regulations specifically related to tribal cultural resources are applicable to the Project.

3.18.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

LSPGC has proposed applicant proposed measures (APMs) to address impacts on cultural resources attributable to Project construction, operations, and/or maintenance. The APMs provided in Section 3.5, *Cultural Resources*, include APM CUL-1 (Development and Implementation of a Worker Environmental Awareness Program), APM CUL-3 (Archaeological and Native American Monitoring, if resources are identified), APM CUL-4 (Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources), and APM CUL-5 (Unanticipated Discovery of Human Remains).

PG&E Construction Measures

PG&E would implement best management practices (BMPs) to address impacts on cultural resources attributable to Project construction, operations, and/or maintenance. The BMPs provided in Section 3.5, *Cultural Resources*, include BMP-17 (Cultural Resources Inadvertent Discovery Protocol), BMP-18 (Human Remains Protocol), and BMP-20 (Worker Awareness Training). No avoidance and minimization measures (AMMs) are applicable to tribal cultural resources.

3.18.4 Environmental Impacts and Mitigation Measures

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on tribal cultural resources. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities, and incorporates both APMs and PG&E BMPs for their respective facilities.

Direct and Indirect Effects

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

There are no tribal cultural resources identified in the Project study area or the PG&E Interconnection Facilities area that are listed or eligible for listing in the California Register of Historical Resources. However, information provided by culturally affiliated Native American tribes indicates that the potential exists to uncover previously undiscovered resources during Project ground-disturbing activities.

The Project would entail excavation that may encounter archaeological materials qualifying as tribal cultural resources. To reduce impacts on previously unknown tribal cultural resources, LSPGC has proposed APMs CUL-1, CUL-3, and CUL-4, which require a worker environmental awareness training for cultural resources, monitoring if a resource is identified, as well as consideration of avoidance, recovery, and documentation of any identified resources. In addition, PG&E has proposed BMP-17, BMP-18, and BMP-20, which provide for a cultural resources awareness training and protocols to follow in the event of an inadvertent discovery of cultural resources or human remains during Project implementation.

The CPUC has determined that these APMs and BMPs would reduce substantial adverse changes in the significance of a tribal cultural resources pursuant to CEQA Guidelines Section 15064.5 to below the level of significance.

- b) **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. 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: *Less than Significant*.**

No tribal cultural resources have been identified in the Project study area or the PG&E Interconnection Facilities area that have been determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c). However, information provided by culturally affiliated Native American tribes indicates that the potential exists to uncover previously undiscovered resources during Project ground-disturbing activities.

The Project would entail excavation that may encounter archaeological materials qualifying as tribal cultural resources. To reduce impacts on previously unknown tribal cultural resources, LSPGC has proposed APMs CUL-1, CUL-3, and CUL-4, which require a worker environmental awareness training for cultural resources, monitoring if a resources is identified, as well as consideration of avoidance, recovery, and documentation of any identified resources. In addition, PG&E has proposed BMP-17, BMP-18, and BMP-20, which provide for a cultural resources awareness training and protocols to follow in the event of an inadvertent discovery of cultural resources or human remains during Project implementation.

The CPUC has determined that these APMs and BMPs would reduce substantial adverse changes in the significance of a tribal cultural resources pursuant to CEQA Guidelines Section 15064.5 to below the level of significance.

3.18.5 References

Gordon, Nicole H., and Lauren K. Chang, 2015. *Subject: AB 52 Guidance for the CPUC in General and the Circle City Project Specifically*. Prepared by The Sohagi Law Group, PLC. Prepared for the California Public Utilities Commission.

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3.19 Utilities and Service Systems

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIX. UTILITIES AND SERVICE SYSTEMS —				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.19.1 Environmental Setting

For the purposes of this analysis, the study area is defined as all relevant utility or service systems (water supply, wastewater, stormwater, solid waste disposal, gas and electrical, and telecommunication utilities) that would provide service to the Project site.

Water Services

The Project would be located within the San Joaquin Valley Groundwater Basin, Westside Subbasin. The subbasin covers 972 square miles, bordered by the Diablo Range to the west and other groundwater subbasins to the north, east, and southern boundaries. The subbasin includes the Westlands Water District (WWD). WWD is the largest agricultural water district in the United States, providing water to users in western Fresno and Kings counties, as well as the area surrounding the Project site. WWD uses a combination of imported surface water, local groundwater, and local surface water to serve its customers. Surface water supplies are imported from the Central Valley Project (CVP). WWD's water supply ranged between 800,000 and 1.4 million acres of water between 1988 and 2021, with 800,000 acres of water supply during the 2020–2021 year (WWD, 2021a). WWD does not deliver treated water for human consumption and is not considered a public water system (WWD, 2021b).

The Applicant anticipates that water required for construction purposes would be trucked in from an off-site location in the city of Huron or the city of Coalinga, which are both provided water via

WWD. The Project would not require water sources for operations and maintenance (O&M) activities, as the facility would be unmanned (LSPGC, 2021).

Wastewater Services

There are numerous wastewater collection systems throughout Fresno County, which are owned and operated by cities and special districts. The county owns and operates 10 wastewater treatment facilities on behalf of water works districts. Residents of rural areas that are not served by centralized systems use on-site septic systems. Industries are required to provide treatment or pre-treatment of their wastewater and obtain separate discharge permits from the Central Valley Regional Water Quality Control Board (Fresno County, 2000). The Project would be unmanned and thus would not generate wastewater, nor would it connect to a wastewater collection system.

Stormwater

Stormwater drainage in the Project area generally percolates into pervious soils or drains to nearby roadside ditches. The adjacent Pacific Gas and Electric Company (PG&E) Gates Substation has an on-site stormwater detention system that captures the majority of runoff on that site. The Project would implement an appropriate stormwater detention system commensurate with the impact of the Project to retain stormwater on-site and would not require a connection to a regional stormwater conveyance system (LSPGC, 2021)

Solid Waste and Recycling Services

A number of landfills are feasible for use by the Project. The nearest landfill to the Project is the Avenal Regional Landfill, approximately 10 miles south of the Project site. Avenal Regional Landfill accepts municipal solid wastes, construction/demolition wastes, as well as special wastes upon special approval (Avenal Landfill 2020). The Avenal Landfill has a remaining capacity of 28,900,000 tons and is expected to reach its permitted capacity in 2056 (CalRecycle 2019a). The American Avenue Landfill, owned and operated by Fresno County, is located in the city of Kerman, approximately 35 miles northeast of the Project site (Fresno County 2021). The American Avenue Landfill is permitted to receive 2,200 tons of waste per day; it has a remaining capacity of approximately 29,358,535 cubic yards and is expected to reach its permitted capacity in 2031 (CalRecycle 2019b).

The Project site is also located within the Mid Valley Disposal Company service area. The Mid Valley Disposal company has multiple locations including the Kerman MFR & Transfer Station, Fresno MFR & Transfer Station, and the Coalinga Transfer Station (Mid Valley Disposal, 2021). The Shaver Lake Transfer Station is operated in partnership with Fresno County, Granite Solid Waste, and the U.S. Forest Service (Fresno County 2020).

Gas and Electrical

PG&E is an investor-owned utility company that provides electricity and natural gas supplies and services throughout a 70,000-square-mile service area that includes western Fresno County and the Project site (PG&E 2021).

The adjacent PG&E Gates Substation is an integral part of the Central Valley 500-kilovolt transmission system importing and exporting electricity to other substations in the region. Numerous local electrical distribution lines in the area could serve the Project during construction and O&M. The Project would tap into the existing PG&E distribution line that runs along the unpaved access road, east of the Project site (LSPGC, 2021).

PG&E also operates transmission- and distribution-level natural gas lines in the Project area. The Project would not require a natural gas distribution connection.

Telecommunications

Communications within the vicinity of the Project include cellular telephone service provided by AT&T; cable television service provided by several providers, including Dish Network and DirecTV; and several internet providers, including AT&T and HughesNet (LSPGC, 2021).

3.19.2 Regulatory Setting

Federal

No federal regulations pertaining to utilities and service systems apply to the Project.

State

Sustainable Groundwater Management Act

In 2014, a three-bill legislative package was signed into law by Governor Brown. The three-bill package, comprising Assembly Bill (AB) 1739, Senate Bill (SB) 1168, and SB 1319, is known as the Sustainable Groundwater Management Act (SGMA). The SGMA requires governments and water agencies of high- and medium-priority basins to manage overdrafting to bring groundwater basins to balanced levels of pumping and recharge. The SGMA empowers local agencies to form groundwater sustainability agencies to manage basins and adopt groundwater sustainability plans for crucial groundwater basins in California.

The California Integrated Waste Management Act

The Integrated Waste Management Act was enacted in 1989 as AB 939 and codified in Public Resources Code Section 40050 et seq. The act required all California cities, and unincorporated portions of counties, counties, and approved regional solid waste management agencies, to divert a minimum of 25 percent of solid waste from landfills by 1995 and 50 percent by 2000. Cities and counties were required to maintain the 50 percent diversion specified by AB 939 past 2000. Diversion includes waste prevention, reuse, and recycling. The act resulted in the creation of the California Integrated Waste Management Board, now known as the California Department of Resources Recycling and Recovery (CalRecycle). Under the Integrated Waste Management Act, jurisdictions also must submit solid waste planning documentation to CalRecycle. The act set into place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

California Health and Safety Code Section 25150.7(d)(1)

The Integrated Waste Management Act of 1989, also known as AB 939, mandates that California's jurisdictions divert 50 percent of their solid waste from landfills. CalRecycle is under the umbrella of the California Environmental Protection Agency (CalEPA) and is responsible for the implementation of AB 939.

Title 22 California Code of Regulations Division 4.5

California Code of Regulations (CCR) Title 22 discusses an array of requirements with respect to the disposal and recycling of hazardous and universal wastes. Specific standards and requirements are included for the identification, collection, transport, disposal, and recycling of hazardous wastes. Additional standards are included for the collection, transport, disposal, and recycling of universal wastes. Universal wastes are defined as those wastes identified in 22 CCR Section 66273.9, including batteries, electronic devices, mercury-containing equipment, lamps, cathode ray tubes, and aerosol cans. Requirements include recycling, recovery, the return of spent items to the manufacturer, or disposal at an appropriately permitted facility. Division 4.5 of Title 22 also provides restrictions and standards relevant to waste destination facilities and provides authorization requirements for various waste handlers. Title 22 includes California's Universal Waste Rule, as well as other additional waste handling and disposal requirements.

California Code of Regulations (Title 27)

CCR Title 27 defines regulations for the treatment, storage, processing, and disposal of solid waste. The State Water Resources Control Board (SWRCB) maintains and regulates compliance with CCR Title 27. The Project's compliance would be enforced by the Central Valley Regional Water Quality Control Board (RWQCB) (Region 5).

California Government Code

Section 4216 of the California Government Code protects underground structures during excavation. Under this law, excavators are required to contact a regional notification center at least two days prior to excavation of any subsurface installations. In the Project area, USA is the regional notification center. USA notifies utility providers with buried lines within 1,000 feet of the excavation, and those providers are required to mark the specific location of their facilities prior to excavation. The code also requires excavators to probe and expose existing utilities, in accordance with state law, before using power equipment. CCR Title 20 (2014) contains statutes relating to power plant siting and certification.

California Public Utilities Commission General Order 131-D

The California Public Utilities Commission (CPUC) regulates services and utilities and assures California's access to safe and reliable utility infrastructure and services. The essential services regulated include electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC implements CEQA for utility construction by PG&E and the other public utilities under its jurisdiction, and regulates the location and relocation of power lines by investor-owned utilities, such as PG&E. Section XIV B. of General

Order 131D clarifies that local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to CPUC jurisdiction (CPUC, 1995).

Local

Pursuant to General Order 131-D, the CPUC has jurisdiction over the siting, design, and construction of substations and power lines; therefore, the Project is not subject to local discretionary regulations (CPUC, 1995). Details below that relate to local regulations are provided for informational purposes.

Fresno County

Fresno County Code of Ordinances Title 8, Chapter 8.25 (Construction and Demolition Debris Disposal Ban) and Chapter 8.28 (Industrial Waste) provide guidelines for removal and disposal of industrial waste materials, including fluids and solid materials incidental to the construction and O&M activities of the Proposed Project. Other Fresno County ordinances include Title 14, Chapter 14.13 (Regulation of Wastewater Discharge in the County of Fresno), which addresses stormwater runoff, and Title 15, which includes multiple chapters regarding building and construction guidelines.

Fresno County Construction and Demolition Debris Recycling Program

The Fresno County Construction and Demolition (C&D) Debris Recycling Program is intended to assist the County in compliance with the AB 939 (discussed above) and to provide builders with a way to document waste reduction requirements included in the California Green Building Standards Code (CALGreen) (24 CCR Part 11). The program contains the following requirements related to utilities that would be applicable to the Project during the decommissioning phase.

1. Complete and submit a Waste Management Plan (WMP) for recycling a minimum of 65 percent of all nonhazardous waste, scrap, and debris generated for the scope of work covered by the building permit.
2. During construction/demolition, collect data for your project's Waste Log, ensure that all subcontractors are familiar with the WMP, and have signed the Acknowledgement Form. Keep all weight/gate tags, receipts, and invoices for services to support the data on the Waste Log.
3. After your project is complete and 14 days prior to your project's final inspection, submit the completed Acknowledgement Form(s), Waste Log, and all supporting documents.

Fresno County General Plan

The Fresno County General Plan Public Facilities and Services Element (2000) contains the following policies related to utilities and service systems that are relevant to the Project (Fresno County 2000):

Policy PF-A.4: The County shall encourage the placement of irrigation canals and utility lines underground as urban residential, commercial, and industrial development takes place.

Policy PF-C.3: To reduce demand on the County's groundwater resources, the County shall encourage the use of surface water to the maximum extent feasible.

Policy PF-C.25: The County shall require that all new development within the County use water conservation technologies, methods, and practices as established by the County.

Policy PF-D.6: The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be provided.

Policy PF-E.11: The County shall encourage project designs that minimize drainage concentrations and maintain, to the extent feasible, natural site drainage patterns.

Policy PF-E.13: The County shall encourage the use of natural storm water drainage systems to preserve and enhance natural drainage features.

Policy PF-E.14: The County shall encourage the use of retention-recharge basins for the conservation of water and the recharging of the groundwater supply.

Policy PF-E.21: The County shall require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities, and shall encourage the urban storm drainage systems and agricultural activities to use BMPs.

Policy PF-F.1: The County shall continue to promote maximum use of solid waste source reduction, reuse, recycling, composting, and environmentally-safe transformation of wastes.

Policy PF-F.4: The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.

Policy PF-J.1: The County shall encourage the provision of adequate gas and electric, communications, and telecommunications service and facilities to serve existing and future needs.

3.19.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

The following applicant proposed measure (APM) is proposed by the Applicant to address potential impacts related to utilities and service systems.

- **APM UTIL-1:** The Applicant shall notify all utility companies with utilities located within or crossing the Orchard Substation Facilities' Rights-of-Way (ROW) to locate and mark existing underground utilities along the entire length of the Orchard Substation Facilities at least 14

days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.

- **APM WQ-2:** Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following:
 - Recovered groundwater would be contained on site and tested prior to discharge;
 - If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing);
 - Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains;
 - Water unsuitable for land application would be disposed of at an appropriately permitted facility; and
 - Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE, RWQCB, and/or CDFW, as applicable).

PG&E Construction Measures

PG&E would implement the following BMPs to address potential effects on utilities and service systems. No avoidance and minimization measures are directly applicable to the discussion of impacts.

- **BMP-14: Stormwater Measures.** The Project EFS will provide the Stormwater Group with the following upon completion of the PER: Stormwater Needs Request Form, Soil Disturbance Calculation Spreadsheet, and a KMZ file showing the proposed work area. These documents shall be sent by the Project EFS, via email, to: stormwater@pge.com (if applicable).
- **BMP-15: Stormwater Management A-ESCPs**
 - Good Housekeeping (Attach Document)
 - Stockpile Management

3.19.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on utilities and service systems. The analysis considers both the

Orchard Substation Facilities and the PG&E Interconnection Facilities, and incorporates both applicant proposed measures and PG&E–construction measures for their respective facilities.

Direct and Indirect Effects

- 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: *Less than Significant.***

Water

Water trucks and portable water tanks would be used during construction and decommissioning for dust suppression and compaction requirements, as described in Chapter 2, *Project Description*. Water would be trucked from an off-site location during construction and brought in during O&M activities. No ongoing water supply is required following the construction phase. Therefore, the Project would not require or result in the relocation or construction of new or expanded water facilities, and the impact would be less than significant.

Wastewater

Construction activities would not be connected to the local wastewater system and portable units for restrooms during construction would not require water. Sanitary waste would be transported off-site by licensed sanitary wastewater service provider. Because the Orchard Substation and associated facilities would not require on-site staff to operate the facilities, ongoing wastewater service would not be needed during the operations phase. Therefore, the Project would not require or result in the relocation or construction of new or expanded wastewater facilities, and the impact would be less than significant.

Stormwater

The Project would be constructed and operated in a rural location, one not subject to municipal stormwater requirements. To control runoff during construction, the Project would include construction of a 1,260-cubic-yard stormwater detention basin and conveyance system for stormwater collection, as described in Chapter 2, *Project Description*. Construction activities would be performed in accordance with a stormwater pollution prevention plan that would incorporate BMPs for sediment and erosion control. Construction of the Orchard Substation and stormwater detention basin would require clearing of approximately 8 acres of cropland within the Project site. No off-site construction is proposed. For these reasons, the Project would not require or result in the construction or relocation of new or expanded stormwater facilities outside the Project footprint, nor would the Project cause any changes in stormwater flow that would cause an adverse environmental effect. Impacts associated with on-site stormwater detention facilities would be less than significant.

Electric Power

The Project would involve construction of the Orchard Substation and two interconnection transmission lines, which would connect to PG&E’s Gates Substation. The interconnection

transmission lines would be built on PG&E's property, south of and adjacent to the proposed Orchard Substation. As described in Chapter 2, *Project Description*, a distribution line would be installed from an existing PG&E line to temporarily provide power during construction. The Project would not utilize long-term power during O&M, as it does not require electric power for itself to operate.

With the exception of the distribution line, no electrical power services would be required during construction and decommissioning. The connections proposed as part of the Project could result in potential environmental impacts as discussed in the various resource sections of this Initial Study. However, the Project would not result or require the construction or relocation of new or expanded electric facilities beyond those analyzed as part of the Project. For this reason, impacts associated with new or expanded electrical facilities would be less than significant.

Natural Gas

No natural gas facilities are proposed or required as part of the Project, nor would the Project result in the relocation or construction of new or expanded natural gas facilities that would cause an adverse environmental effect. There would be no impact.

Telecommunication Facilities

As described in Chapter 2, *Project Description*, two telecommunication lines and associated underground fiber optic cables, which would connect to existing infrastructure, are proposed as part of the Project. The two lines would be provided by AT&T, with the first one routing from existing infrastructure and the second one routing to an existing telecommunications line and eventually into the PG&E Gates Substation. To reduce environmental impacts on utilities and service systems, APM UTIL-1 would be implemented, requiring the Applicant to mark and notify all utility companies of utilities located within the Orchard Substation Facilities' ROW. No subsurface work that would conflict with an existing buried utility would be performed. Work that would conflict with utilities would be realigned as appropriate to provide buffering and avoid other utilities. For this reason, construction required to expand telecommunications services for Project purposes would generate a less-than-significant impact.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years: *Less than Significant.*

Project construction, which is anticipated to last approximately 2 years, would require temporary use of potable water for dust control and compaction requirements as described in Chapter 2, *Project Description*. Restroom facilities during construction would not require water and would be provided by portable units. The Project would require approximately 740,000 gallons of water for construction and would be supplied by the Cities of Huron and Coalinga, which both receive water from WWD. Operation and maintenance of the Project would not require potable water service because the substation would be unstaffed.

Water demand during construction would be temporary and minor in comparison to WWD's water supply capacity and annual demand. WWD obtains water through multiple sources as a part

of its overall portfolio. As noted in Section 3.10, *Hydrology and Water Quality*, water use during the construction phase would constitute approximately 0.00025 percent of WWD's overall water supply. The estimated water requirements for fugitive dust control (BMP-6) and other construction of the PG&E portion of the Project have not been quantified; however, given that a smaller scale of disturbance and construction would occur for the PG&E facilities compared to the Orchard Substation facilities, a relatively smaller quantity of water would likely be needed for the PG&E Interconnection. For these reasons, there would be adequate water supply to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. The impact would 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: *No Impact.*

The Project would not require new wastewater service connections during construction, operation, or decommissioning. As described, portable units for restrooms during construction would not require on-site water and sanitary waste would be transported off-site by a licensed sanitary service provider. Because the Project would not require the ongoing use of wastewater treatment, capacity exceedances would not occur. Therefore, there would be no impact.

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: *Less than Significant.*

Approximately 300 cubic yards of solid waste would be generated during Project construction, and a minimal amount would be generated during the O&M and decommissioning phases because the Project would be unmanned. Waste generated would be primarily non-hazardous, as described in Chapter 2, *Project Description*. To reduce waste, excavated material would be used in as backfill when possible and recyclables would be transported to an approved facility. No waste would be generated during O&M. Non-recyclable construction waste would be disposed of at Avenal Regional Landfill or another approved facility.

It is assumed that the Project would comply with the CalGreen Code and the Fresno County C&D Debris Recycling Program, which is intended to assist the County in compliance with the state (AB 939) solid waste reduction goal to divert 75 percent of waste from landfills (CalRecycle, 2021). During Project construction, O&M, and decommissioning, approximately 90 percent of wood, 80 percent of metal, and 50 percent of plastic waste would be reused or recycled, as described in Chapter 2, *Project Description*.

As described in Section 3.18.1, *Environmental Setting*, the Avenal Landfill has a remaining capacity of approximately 28,900,000 cubic yards and is expected to reach capacity by 2056. The next closest landfill to the Project site, the American Avenue Landfill, is permitted to accept 2,200 tons of waste per day and has a remaining capacity of 29,358,535 cubic yards, and would have adequate capacity to accept the Project's solid waste even if this amount were delivered in one day.

The total construction waste generated by the Project would account for a less-than-significant amount of the Avenal Landfill's remaining capacity. If the Project were decommissioned after the closure of the Avenal Landfill, waste would be hauled to another approved facility, such as the American Avenue Landfill.

For these reasons, the Project would not contribute significantly to the impairment of solid waste reduction goals or generate waste in excess of state or local standards. Therefore, impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste: *Less than Significant.*

The Project would be required to comply with the CalGreen Code and the Fresno County C&D Debris Recycling Program's requirements, which are intended to assist the County with its compliance with the solid waste reduction goals of AB 939. The program requires County building permit applicants to recycle a minimum of 65 percent of nonhazardous waste, scrap, and debris generated by work covered under a building permit.

As described in Chapter 2, *Project Description*, waste generated during construction would be primarily non-hazardous. Waste would be transported to an approved recycling facility when feasible, and non-recyclables would be disposed of at the Avenal Landfill. A minimal amount of waste would be generated during O&M activities, as workers would perform O&M activities periodically (LSPGC, 2021). Project construction and operation would comply with the construction and demolition debris recycling program by diverting, repurposing, or recycling non-hazardous waste to the maximum extent feasible, in compliance with the local requirements. Therefore, the impact would be less than significant.

3.19.5 References

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3.20 Wildfire

<i>Issues:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XX. WILDFIRE — 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section identifies and evaluates issues related to wildfire in the context of the Project. It includes a description of designated wildfire hazard zones through which the Project crosses as well as a discussion of the existing fire environment. This section further provides a discussion of applicable state, regional, and local plans and programs, and an evaluation of potential impacts associated with implementation of the Project. For the purposes of this analysis of wildfire risk, the study area is defined as the Project boundary, existing access roads, and areas where housing and structures are located downstream or downslope of the Project.

Although the Project is not located in or near any state responsibility areas or lands classified as very high fire hazard severity zones, as described below in Section 3.20.1, *Environmental Setting*, this section addresses impacts of the Project on wildfire risk due the public interest in wildfire risk related to electrical utility infrastructure and the California Public Utilities Commission's (CPUC) commitment to reducing wildfire hazards.

3.20.1 Environmental Setting

CAL FIRE Fire Hazard Severity Zone Designations

The State of California (through the California Department of Forestry and Fire Protection [CAL FIRE]) has the primary legal and financial responsibility for the prevention and suppression of wildland fires in State Responsibility Areas (SRAs), while Local Responsibility Areas (LRAs) include incorporated cities and more densely populated areas with fire protection typically provided by city fire departments, fire protection districts, counties, and/or joint agreements with CAL FIRE. The Project site is entirely within an LRA.

CAL FIRE has published Fire Hazard Severity Zone (FHSZ) maps for lands in SRAs. However, in LRAs, where CAL FIRE does not have jurisdiction to officially designate FHSZs, CAL FIRE has published maps of Recommended Very High FHSZs, which cities and counties are encouraged to adopt into local plans; however, no Very High FHSZs have been recommended in Fresno County. The Project site is “unzoned” and the nearest FHSZ in any jurisdiction is located approximately 4 miles west and southwest of the Project site and is designated as Moderate (CAL FIRE, 2007). This indicates a low level of concern by CAL FIRE regarding wildfire hazard in the vicinity of the Project site.

California Public Utilities Commission–Designated Wildfire Hazard Zones

Pursuant to its Fire Safety Rulemaking, CPUC mapped high-fire-threat areas where more stringent inspection, maintenance, vegetation clearance, and wire clearance requirements (as required by CPUC General Orders 95, 165, and 166, described in Section 3.20.2, *Regulatory Setting*, below) would be implemented due to the elevated risk for power line fires. The CPUC High Fire Threat District Map identifies elevated risk for fires associated with utilities based on criteria such as fire hazards associated with historical power line-caused wildfires and current fuel conditions and scores geographic areas based on where fires start, as opposed to where potential fires may cause impacts. The Project site is not located in a CPUC-designated High Fire Threat District (CPUC 2017).

Fire Protection Services

Fire protection services in the vicinity of the Project site are provided by the Fresno County Fire Protection District (FCFPD). Section 3.15, *Public Services*, outlines additional details regarding fire protection services. The closest fire station to the Project site is Station 93, located approximately 4 miles to the northeast at 36421 S. Lassen Avenue in the community of Huron (FCFPD 2021). The FCFPD, as the local responsible agency, would have primary responsibility for responding to fires for the Project site and surrounding area.

Fire Environment

Fire behavior is primarily dependent upon fuels (e.g., vegetation), weather (e.g., wind, temperature, and humidity), and topography (e.g., slope, elevation, and aspect). The combination of these three factors, which are described in more detail below, can help or hinder the spread of a wildfire if one occurs.

Topography

Topography describes the shape of the land and can include descriptions of elevation (height above sea level), slope (the steepness of the land), aspect (the direction a slope faces), and features such as canyons and valleys. Topography can strongly influence fire behavior, including how fast a fire moves through an area: fire typically moves more quickly as it travels uphill compared to either downhill or across flat terrain. As heat rises in front of the fire, it preheats and dries upslope fuels, resulting in their rapid combustion (Bennett 2017).

Fresno County can be categorized into three geographical regions as distinguished by their topography. The three regions include: (1) broad, flat valley floors that generally slope from the southeast to the northwest; (2) foothills and moderately high mountains (Coast Ranges) in the west; and (3) foothills and high mountains (Sierra Nevada) in the east. Approximately 55 percent of the County is mountainous, and 45 percent is valley land. Elevations range from 100 to 400 feet on the valley floor to 4,000 feet in the Coast Ranges and more than 14,000 feet in the Sierra Nevada (Fresno County 2018). The Project site is located within the furthest southwest corner of the first geographical region, which contains predominantly flat valley floors with a gentle or gradual slope along the south western portion of Fresno County. This flat topography in the vicinity of the Project site is one contributor to the lack of fire hazard severity zoning and CPUC high fire threat designation in this region, as described above.

Vegetation/Fuels

Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel sources are diverse and include dead tree leaves, twigs, branches, and standing trees; live trees; brush; and dry grasses. Additional fuel sources can include manmade structures such as homes, buildings, and other associated combustible materials. Fuel types in the vicinity of the Project site are primarily made up of annual grasses, with deciduous oaks and heavy brush also occurring in western Fresno County (Fresno County 2018). The Project site and immediate surrounding area contains predominantly agricultural fallow land and contains few to no trees, brush, or branches onsite. This relative lack of fuels is another contributor to the lack of identified fire hazard on the site. For additional description of vegetation types surrounding the Project site, see Section 3.4, *Biological Resources*.

Weather/Climate

Weather conditions such as wind, temperature, and humidity also contribute to fire behavior. Fuels located in hotter and drier temperatures are more susceptible to ignition and catch fire more readily than fuels located in moister and/or cooler temperature conditions.

Summers are long, hot, and dry in the valley in which the Project site is located. Winters are short and mild with light rain. Most of the seasonal precipitation occurs between October and April (Fresno County 2018). Over the course of the year, temperature typically varies from 39 degrees Fahrenheit (°F) to 99°F and is rarely below 31°F or above 106°F. Wind within Fresno County is highly dependent on local topography and other factors, however, the windiest parts of the year last from April to July with wind speeds averaging around 5.6 miles per hour (Weather Spark 2021).

Fire History

Wildfire is an ongoing concern in Fresno County and throughout California. Historically, the fire season extended from June through October of each year during the hot, dry months. Since 2010, however, the fire season has been getting longer: typically starting in May and extending into November. Regardless of fire “season,” wildfires can occur any time of the year. According to Figure 4.54 included as the *Fresno County Fire History Map* within the Multi-Jurisdictional

Hazard Mitigation Plan (HMP), few to no fires are known to have occurred within 5 miles of the Project site, and the Project site is not located in an area categorized as having an increased hazard severity risk (Fresno County 2018).

According to the Fresno-Kings Unit Fire Plan, in 2020 the Fresno-Kings Unit wildfire activity consisted of 100 fires totaling 32,189 acres in SRA and 473 fires totaling 2,752 acres in LRA. The top ignition sources of wildland fire causes in LRA's was due to arson (98 fires), undetermined (64 fires), debris burning (54 fires), vehicle (45 fires), miscellaneous (33 fires), equipment (26 fires), electrical power (21 fires), playing with fire (19 fires), smoking (6 fires), under investigation (6 fires), campfire (4 fires), railroad (1 fire), and lightning (1 fire) (CAL FIRE 2020).

Impacts of Wildfire on Air Quality

As wildfires burn fuel, large amounts of carbon dioxide, particulate matter, and ozone precursors are released into the atmosphere. Additionally, wildfires emit a substantial amount of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter. These emissions can lead to harmful exposures for first responders, nearby residents, and even populations in regions farther from the wildfires (NOAA 2021). Exposure to these pollutants can cause asthma attacks, coughing, and shortness of breath. Chronic exposure to these pollutants can increase the risk of developing chronic health conditions such as heart disease, diabetes, and cancer (Hamers 2018; Milman 2018). These pollutants are described in more detail in Section 3.3, *Air Quality*.

3.20.2 Regulatory Setting

Federal

North American Electric Reliability Corporation Standards

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority comprising 10 regional reliability councils. The overarching goal of NERC is to ensure the reliability of the bulk power system in North America. To achieve its goal, NERC develops and enforces reliability standards, monitors the bulk power systems, and educates, trains, and certifies industry personnel. In order to improve the reliability of regional electric transmission systems and in response to the massive widespread power outage that occurred on the Eastern Seaboard, NERC developed a transmission vegetation management program that is applicable to all transmission lines operated at 200 kilovolts (kV) and higher, as well as lower voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region (NERC 2020). The program applies to PG&E's transmission line-related vegetation management activities in the Project area such as NERC Standard FAC-003, Transmission Vegetation Management.

The program, which became effective on April 7, 2006, establishes requirements of the formal transmission vegetation management program, which include identifying and documenting clearances between vegetation and any overhead, ungrounded supply conductors, while taking

into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway. The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers Standard 516-2003 (*Guide for Maintenance Methods on Energized Power Lines*) (IEEE 2003), which establishes minimum vegetation-to-conductor clearances to maintain the electrical integrity of the electrical system.

State

2019 Strategic Fire Plan for California and Fresno-Kings Unit Strategic Fire Plan

Developed by the Board of Forestry and Fire Protection (Board), the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE's overall policy direction and vision. The 2019 Plan demonstrates CAL FIRE's focus on: (1) improving their core capabilities; (2) enhancing their internal operations; (3) ensuring health and safety; and (4) building an engaged, motivated and innovative workforce. CAL FIRE provides direction for fire prevention and enforcement within the SRA using fire resource assessments, a variety of available data, mapping, and other tools. Pre-fire management activities, including prescribed burning, fuel breaks, forest health treatments, and removal of hazardous vegetation, are conducted at the unit level under the guidance of CAL FIRE program managers. Through the 2019 Strategic Plan, CAL FIRE also delivers Land Use Planning and Defensible Space Inspection programs to the local level across the state (CAL FIRE 2019).

The California Strategic Fire Plan outlines 21 Operational Units. The Project site is located within the Fresno-Kings Operational Unit and would follow goals and objectives outlined within the Fresno-Kings Unit Strategic Fire Plan, which was completed by a collaborative effort with various stakeholders in the Unit, program managers, bureau managers, and Battalion Chiefs. The Unit's Fire Plan is updated each year based upon the accomplishments, goals, and objectives outlined by the Unit and the California Strategic Fire Plan. The Unit's Fire Plan is executed by a continued working relationship with CAL FIRE and the FCFPD and is divided into battalions. The Project site is located within the jurisdictional area of Battalion 15, which predominantly covers the central and western area of the FCFPD in the Fresno Kings Unit (CAL FIRE 2020). Battalion 15 consists of 730,970 acres of LRA.

California Emergency Response Plan

Pursuant to the Emergency Services Act (Government Code Section 8550 et seq.), California has developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the United States Environmental Protection Agency (USEPA), California Highway Patrol (CHP), California Department of Fish and Wildlife (CDFW), the nine regional water quality control boards (including, as relevant to this Project, the Central Valley Regional Water Quality Control Board), the local air districts (including the San Joaquin Valley Air Pollution Control District), and local agencies. The State

Emergency Plan defines the “policies, concepts, and general protocols” for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

Fire Protection in California Fire Code and Public Resources Code

The California Fire Code is contained within Title 24, Chapter 9 of the California Code of Regulations. Based on the International Fire Code, the California Fire Code is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the California Fire Code and the California Building Code use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

The California Public Resources Code includes fire safety provisions that are deemed necessary by the director or agency with primary responsibility for fire protection in the area. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas. Additional provisions in Public Resources Code Sections 4294 to 4296 require that any owners or operators of electrical transmission or distribution lines on grass-covered land, such as found at and near the Project site, maintain a firebreak clearing around and adjacent to poles, towers, and conductors. Section 4292 requires that PG&E maintain a 10-foot firebreak clearance around the base of a utility pole, with tree limbs within the 10-foot radius of the pole being removed up to 8 feet above ground. The State’s Fire Prevention Standards for Electric Utilities (California Code of Regulations Title 14, Sections 1250–1258) provide specific exemptions from electric pole and tower firebreak and electric conductor clearance standards and specifies when and where standards apply.

California Public Utilities Commission General Orders

General Order 95

CPUC General Order 95 applies to work conducted by PG&E including the construction and reconstruction of overhead electric lines. The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of this order.

The CPUC has promulgated various rules to implement the fire safety requirements of General Order 95, including:

- Rule 18A, which requires utility companies take appropriate corrective action to remedy Safety Hazards and General Order 95 nonconformances. Additionally, this rule requires that each utility company establish an auditable maintenance program.
- Rule 31.2, which requires that lines be inspected frequently and thoroughly.

- Rule 35, which requires that vegetation management activities be performed in order to establish necessary and reasonable clearances. These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order.
- Rule 38, which establishes minimum vertical, horizontal, and radial clearances of wires from other wires (CPUC, 2018).

General Order 165

General Order 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform “Patrol” inspections, which are defined as a simple visual inspection of utility equipment and structures (which inspection is designed to identify obvious structural problems and hazards) at least once per year for each piece of equipment and structure. Detailed inspections, where individual pieces of equipment and structures are carefully examined, are required every 5 years for all overhead conductor and cables, transformers, switching/protective devices, and regulators/ capacitors. By July 1 of each year, each utility subject to this General Order must submit an annual report of its inspections for the previous year under penalty of perjury (CPUC, 2017b).

General Order 166

General Order 166 Standard 1.E requires investor-owned utilities (IOUs) to develop a fire prevention plan, which describes measures that the utility will implement to mitigate the threat of power line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning¹ event in a high fire threat area. Fire prevention plans formulated by IOUs are required to identify specific parts of the utility’s service territory where the conditions described above (i.e., Red Flag Warnings and high wind events) may occur simultaneously. Standard 11 requires that utilities report annually to the CPUC regarding compliance with General Order 166 (CPUC, 2017c). In compliance with Standard 1.E of this General Order, PG&E adopted a fire prevention plan on September 30, 2017.

PG&E Company Emergency Response Plan

Standard 1 also requires that utilities prepare an emergency response plan. PG&E’s Emergency Response Plan, prepared in compliance with Standard 1 describes and formalizes PG&E’s in-place plans and protocols for responding to emergencies. The plan identifies potential hazards, available resources to respond to emergencies, internal communication protocols, and operational structure. Additionally, PG&E’s Wildfire Safety Operations Center operates 24-hours a day during wildfire season (PG&E, 2018).

Senate Bill 1028 and Senate Bill 901

Senate Bill 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment, and makes a violation of these provisions by an

¹ A “Red Flag Warning” is issued by the National Weather Service to alert fire departments of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity.

electrical corporation a crime under state law. The bill also requires each electrical corporation to annually prepare a wildfire mitigation plan and submit to CPUC for review. The plan must include a statement of objectives, a description of preventive strategies and programs that are focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall wildfire mitigation plan performance and assumptions that underlie the use of the metrics.

Senate Bill 901 (2018) expanded upon the wildfire mitigation plan requirements of Senate Bill 1028 and included several provisions related to wildfire risk and management in California including increasing the maximum penalties that can be issued by the CPUC to a public utility that fails to comply with CPUC requirements. Additionally, the legislation added to the requirements for utilities' wildfire mitigation plans, which must now include: consideration of dynamic climate change risks; protocols for disabling reclosers² and de-energizing portions of the electrical distribution system that consider the associated impacts on public safety; protocols related to mitigating the public safety impacts of those disabling and de-energizing protocols, including impacts on critical first responders and on health and communication infrastructure; and particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the electrical corporation's service territory. These wildfire mitigation plans are required to be reviewed by an independent evaluator.

PG&E Wildfire Mitigation Plan

On February 5, 2021, PG&E submitted its 2021 Wildfire Mitigation Plan (WMP) in compliance with California SB 901, AB 1054, and direction from the CPUC Wildfire Safety Division. The 2021 WMP provides updated details on PG&E's comprehensive Community Wildfire Safety Program, incorporates lessons learned from the 2020 wildfire season, and outlines the additional programs planned to continue to reducing the risk of catastrophic wildfires. PG&E's updated WMP has three overarching goals: (1) reducing wildfire ignition risk, (2) enhancing wildfire risk situational awareness, and (3) reducing the impact of Public Safety Power Shutoff (PSPS) events. The updated 2021 WMP benefits from both historical data (weather patterns, detailed information on previous ignitions, outages and other risk events, etc.) as well as state-of-the-art tools such as fire-spread technology that shows the locations where specific infrastructure failures can lead to ignitions that have the highest consequences for specific communities. Wildfire mitigation workstreams, system hardening, and enhanced vegetation management will be a main focus for the updated 2021 WMP in higher risk circuit segments and in fire rebuild areas (PG&E, 2021).

Local

It is noted that while local jurisdictions are preempted from regulating the Project with respect to land use, the land use plans, policies, and regulations described below are used in the impact analysis to determine whether any actual adverse environmental impact could occur as a result of a conflict with these plans, policies, and regulations.

² Reclosing devices, such as circuit breakers, are used to isolate circuit segments when abnormal system conditions are detected.

Fresno County 2000 General Plan

The Health and Safety Element of the Fresno County General Plan establishes policies and programs to protect the community from risk associated with emergency management and response, as well as fire hazards. The Fire Hazards section within the Health and Safety Element is designed to ensure that new development is constructed to minimize potential fire hazards, minimize the risk of fire in already developed areas, and to provide public education concerning fire prevention (Fresno County, 2000). State preemption of local land use authority would ensure the Project would remain consistent with the fire hazard-related goals and policies of the Health and Safety Element.

Fresno County Multi-Hazard Mitigation Plan

The purpose of the Fresno County Multi- Hazard Mitigation Plan is to reduce or eliminate any long-term risk to people and property from hazards such as floods, wildfires, severe weather, drought, and agricultural hazards which could have a significant impact on the County. Fresno County and the other participating jurisdictions developed this multi-hazard mitigation plan to make the County and its residents less vulnerable to future hazard events, such as wildfire (Fresno County, 2018). The Multi-Hazard Mitigation Plan recommends a number of mitigation actions in order to reduce the County's vulnerability to hazardous events, such as emergency plans or evacuation routes.

Fresno County Operational Area Master Emergency Services Plan

In 1995, the Fresno County Board of Supervisors adopted California's Standardized Emergency Management System, established the geographic area of the County of Fresno as the Fresno County Operational Area, and designated Fresno County as the Operational Area Lead Agency (Fresno County, 2017). The Fresno County Office of Emergency Services (OES) coordinates the development and maintenance of the Fresno County Operational Area Master Emergency Services Plan (Fresno County OAMESP). The OES prepared the Fresno County OAMESP to serve as a guide for response to an emergency/disaster in the unincorporated areas of the Fresno County Operational Area, and to coordinate and assist with the disaster response in jurisdictions both within and outside of the Fresno County Operational Area.

3.20.3 Applicant Proposed Measures and PG&E Construction Measures

Applicant Proposed Measures

All applicable applicant proposed measures (APMs) related to wildfire risk (i.e., emergency evacuation plans, fire safety, and erosion control) are provided below and would be implemented as part of the Project.

- **APM TRA-1:** LSPGC would prepare a Traffic Control Plan to describe measures to be taken to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LSPGC would follow its standard safety practices as needed, including installing appropriate barriers between work zones and

transportation facilities, posting adequate signs, and using proper construction techniques. LSPGC would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for obtaining a local encroachment permit, LSPGC would establish a Traffic Management Plan (TMP) to address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Construction activities would be coordinated with local law enforcement and fire protection agencies. Emergency service providers would be notified as required by the local permit of the timing, location, and duration of construction activities.

- **APM HAZ-4:** LSPGC shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. Although the Proposed Project area is not located within an area designated as a Very High or High Fire Severity Zone, LSPGC will prepare a Construction Fire Prevention Plan prior to construction.

All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.

Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks, fire extinguishers, and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.

- **APM WQ-1:** Because the Project involves more than an acre of soil disturbance, a SWPPP [stormwater pollution prevention plan] would be prepared as required by the state NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs [best management practices]. Implementation of the plan would help stabilize disturbed areas and would reduce erosion and sedimentation. The

SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:

- Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas;
- Strictly controlling vehicular traffic;
- Implementing a dust-control program during construction;
- Restricting access to sensitive areas;
- Using vehicle mats in wet areas; or
- Revegetating disturbed areas, where applicable, following construction.

In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.

PG&E Construction Measures

PG&E would implement the following avoidance and minimization measures (AMMs) to address potential effects on wildfire considerations. No BMPs are directly applicable to the discussion of impacts.

- **AMM-7:** In areas of high risk of wildlife electrocution, use insulated jumper wires, animal guards for equipment insulator bushings, or construct lines to follow the Bird and Wildlife Protection Standards.
- **AMM-8:** During fire season in SRAs, carry backpack water sprayers and shovels in all vehicles; during red flag conditions curtail welding, carry a large fire extinguisher on each fuel truck, and clear parking and storage areas of flammable materials.

3.20.4 Environmental Impacts

Methodology and Assumptions

The following analysis uses the criteria from Appendix G of the CEQA Guidelines to identify direct and indirect effects on wildfire. The analysis considers both the Orchard Substation Facilities and the PG&E Interconnection Facilities, and incorporates both applicant proposed measures and PG&E construction measures for their respective facilities.

Direct and Indirect Effects

a) **Substantially impair an adopted emergency response plan or emergency evacuation plan: *Less than Significant.***

There are no specific evacuations routes delineated in the Fresno County Multi- Hazard Mitigation Plan (Fresno County, 2018), Master Emergency Services Plan (Fresno County, 2017), or the Fresno County General Plan (Fresno County, 2000). Evacuation routes would be identified and coordinated by local law enforcement and emergency service responders as needed during an emergency situation.

According to Section 3.17, *Transportation*, and Section 3.9, *Hazards and Hazardous Materials*, Project construction would result in a temporary increase in vehicle trips for hauling and transporting equipment and materials to and from the Project site. Any vehicle trips would be limited to predesignated routes to minimize the contribution of Project construction traffic to roadway congestion in the Project area. As described in Chapter 2, *Project Description*, a temporary or intermittent closure of one lane on West Jayne Avenue would be required for telecommunication related construction activities. Additional vehicle trips and temporary lane closures could result in additional congestion to publicly used and County-maintained roadways surrounding the Project site. Therefore, implementation of the proposed traffic control plan, pursuant to APM TRA-1, described above, would implement measures to control construction-related traffic and congestion and any potential closures that could impede an emergency response plan or emergency evacuation route.

Operation and maintenance would result in minor roadway impacts and would be conducted by small specialized teams that would contribute to a negligible number of vehicle trips. See Section 3.17, *Transportation*, for additional details regarding inspection and maintenance impacts from additional crew members during operation. Decommissioning phases would have similar impacts to construction and would be reduced with the implementation of APM TRA-1 and ensure through traffic and reduce congestion.

Therefore, the Project would have a less-than-significant impact on emergency response and evacuation plans during the construction, operation and maintenance, or decommissioning phases.

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: *Less than Significant.***

The Project structures are not intended for and would not be used for occupation and therefore would not expose occupants to increased risk associated with wildfire. The Project could, however, incrementally exacerbate existing wildfire risks that could affect Project workers if they are present onsite during a fire emergency.

As described above, the Project site is not populated and is sparsely vegetated in a largely flat agricultural region with no forested areas in the vicinity. According to CAL FIRE, CPUC, and

Fresno County, the Project site is not identified as an area of high fire risk (CAL FIRE 2007; CPUC 2017; Fresno County 2018).

The predominant fire hazard from Project construction would involve the use of vehicles and equipment, which could ignite dry vegetation and result in a fire, particularly during the drier, warmer conditions of summer and fall. Construction activities that could result in sparks such as welding or grading have a greater potential to result in an ignition. Therefore, depending on the time of year and the location of construction activities, construction activities could increase the sources of potential ignition associated with Project construction and could temporarily exacerbate the risk of wildfire. If construction were to result in an ignition, wildfire could result in smoke and air pollutants that could result in poor air quality for the surrounding communities. As discussed above, existing conditions on the Project site include flat topography and sparse vegetation, and the area is not historically prone to fires. Therefore, while the use of vehicle and equipment on the Project site could result in an ignition that could lead to the spread of wildfire, the risk of such an impact would be low due to the short-term duration of construction, existing flat topography, lack of vegetation on-site, and distance to population centers.

Although the risk of ignition from construction would be low given existing conditions of the Project site, additional fire prevention measures would be conducted to ensure that the Project would not contribute to an uncontrollable spread of a wildfire. According to Section 2.5.2.15 in Chapter 2, *Project Description*, the Applicant would implement a 10-foot buffer around any activities considered “hot work” (e.g., welding, grinding, or any other activity that creates hot sparks) during construction and vegetation would be cleared. Additionally, a Project-specific Construction Fire Prevention Plan (CFPP) would be prepared pursuant to APM HAZ-4, which includes minimization and response measures that would further reduce any fire hazards during construction. See details above regarding APM HAZ-4. For activities that would not produce sparks but would still have potential to produce a fire hazard such as ground rod or ground wire installation, the Applicant would implement a 5-foot buffer to be cleared of vegetation, and additional details (i.e., handling sparks) would be provided in the CFPP described above. Implementation of associated fire breaks, vegetation clearance, and a Project-specific CFPP (APM HAZ-4) would further ensure that a potential ignition during Project construction would not likely contribute to the spread of a wildfire and the impact would be less than significant during construction.

As discussed in Section 2.6 in Chapter 2, *Project Description*, the PG&E interconnection to the Orchard Substation would consist of two 500 kV high-voltage circuit breakers (HVCBs) in breaker-and-a-half (BAAH) positions within the PG&E Gates Substation. New line-protective relaying, automation, and telecommunications equipment would be installed inside the 500 kV control building within the PG&E Gates Substation. PG&E would also install two 500 kV transmission line circuits from the PG&E Gates Substation to the Orchard Substation. The addition of the power line and poles could result in an increase in fire risk associated with construction of the new infrastructure as well as associated transmission line failures, resulting in sparks such as downed lines, bird strikes, vegetation contact, arc flashes, and equipment failure. Therefore, the PG&E Interconnection Facilities could increase the risk of wildfire due to the increased risk of ignition during construction and operation of the Project.

Given the inherent potential for ignition risk associated with power lines, PG&E's Fire Prevention Plan would be applied to the PG&E Interconnection Facilities, as required by CPUC GO 166. The implementation of operational risk management programs identified in PG&E's Fire Prevention Plan and Wildfire Safety Plan would reduce the risk of an ignition during operation. Relevant programs include enhanced weather monitoring, the Wood Pole Test and Treat Program, Pro-Active Responses to Fire Incidents, enhancements to PG&E's Storm Outage Prediction Model, the Wildfire Reclosing Disable Program, and the implementation of the Public Safety Power Shutoff program (PG&E 2018). Additionally, vegetation along the 230 kV PG&E line would be managed in compliance with NERC Standard FAC-003, Transmission Vegetation Management. The Project also would be subject to the CPUC vegetation management and clearance requirements (GO 95, GO 165, and GO 166). Compliance with the above operational and vegetation clearance requirements would effectively manage the risk of exposing surrounding communities to exacerbated risk of the uncontrolled spread of a wildfire during construction and operation of the PG&E infrastructure. Impacts related to wildland fire from the PG&E infrastructure would be less than significant.

In addition to the compliance measures described above, PG&E would also implement AMM-7 to reduce the risk of wildlife electrocution, which would secondarily also reduce fire risk. AMM-8 provides for specific fire protection measures to be implemented by PG&E in an SRA and during red-flag conditions to reduce risk of wildfires associated with construction of the PG&E Interconnection Facilities.

Once operational, the Orchard Substation would include elements such as the take-off towers and associated distribution lines that could contribute to potential ignition sources and increase wildfire risk. Under Section 35 of General Order 95, the CPUC would regulate all aspects of design, construction, and operations and maintenance of electrical power lines and fire safety hazards for utilities subject to their jurisdiction, which would include the proposed Project. The Project would be in compliance with General Order 95, in addition to clearance standards under California Public Resources Code Sections 4292 and 4293. The Applicant would implement a fire break around the entirety of the Orchard Substation in accordance with all applicable state and federal regulations. Compliance with these independently enforceable regulatory requirements would reduce the potential fire risk associated with the Orchard Substation and associated electrical infrastructure to a less-than-significant level.

Additionally, the Project would be unstaffed and operation of the Orchard Substation facility would be remotely monitored by the Applicant's control center. Routine maintenance of the Project would be minimal and typically consist of approximately six trips per year by crews composed of two or four people. As a part of the routine maintenance and inspection, the Applicant would inspect vegetation clearance requirements of the Orchard Substation facility, interconnection transmission lines, and distribution poles on an annual basis to ensure compliance with clearance requirements in Public Resources Code Section 4292 and Title 14, Section 1254 of the California Code of Regulations. Therefore, due to the reduced number of vehicle maintenance visits present on the Project site during operation and continued vegetation management of fire breaks during routine maintenance, the potential impacts related to wildfires during operation and maintenance would be less than significant.

During decommissioning, the risk of ignition from vehicle and equipment use at the Project site would be similar to the risk during the construction period. Routine maintenance and vegetation clearance during operation and maintenance would ensure that at the time of decommissioning, all required fire breaks are in compliance with all applicable regulatory requirements, and thus the amount of available fuels would be low. As a result, the risk of a decommissioning-related ignition resulting in an exacerbated risk of wildfire would 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: *Less than Significant*.

The Project would include the installation and/or maintenance of fuel breaks, power lines, and other electrical utilities that could help exacerbate the fire risk. The proposed fire and/or fuel breaks, power lines, and electrical utility infrastructure all are considered part of the Project, and the environmental impacts that may result from implementation of these components are analyzed throughout this document on a resource-by-resource basis. Fuel breaks and vegetation clearances, discussed above, would assist with fire prevention and suppression and therefore would not exacerbate fire risk. In addition, construction and maintenance crews would have emergency water sources on-site to respond to fires as required by APM HAZ-4. To reduce fire risk associated with the PG&E Interconnection Facilities, PG&E would comply with CPUC vegetation clearance and other regulatory requirements described under question b) and would implement AMM-7 and AMM-8. Additional impacts associated with power lines and electrical utilities are discussed above in question b.) and would result in a less-than-significant impact. Therefore, the Project would not require the installation or maintenance of infrastructure that has not been considered in the analysis of this Project. As a result, impacts would 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: *No Impact*.

The Project does not include any housing; therefore, it would not expose people to increased risk associated with flooding, landslides, or post-fire slope instability as a result of locating housing near such existing risks.

As identified in Section 3.10, *Hydrology and Water Quality*, question c.), during construction the implementation of a SWPPP and BMPs related to erosion control would reduce potential impacts related to drainage patterns during construction to a less-than-significant level. Therefore, the Project would not result in changes to runoff or drainage patterns that could exacerbate downslope or downstream flooding and thereby expose people or structures to associated risks.

As discussed under question b), Project construction would have a less-than-significant impact on wildfire risk due to the short duration of construction, flat site topography, minimal vegetation, and the Project's implementation of required fuel breaks, vegetation clearances, APM HAZ-4, as well as AMM-7 and AMM-8 (for the PG&E Interconnection Facilities). Because the Project

would have a low potential to exacerbate wildfire risk, it also would not pose a substantial risk of causing post-fire slope instability. Additionally, due to the fact that the Project site is located on flat land, the Project would not be located on slopes that could contribute to the occurrence of landslides or flooding. Therefore, the Project would have no impact with regard to the Project's potential to exacerbate the risk of flooding and mudslides as a result of post-fire slope instability.

3.20.5 References

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3.21 Mandatory Findings of Significance

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.21.1 Mandatory Findings of Significance Discussion

- a) 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: *Less than Significant with Mitigation.***

The analysis presented in this IS/MND has identified, in various sections of this document, a number of potentially significant environmental effects attributable to the Project. To reduce such effects, specific mitigation measures are recommended and would be included in the Project’s Mitigation Monitoring and Reporting Plan upon adoption of the IS/MND. As required by CEQA, these mitigation measures, Applicant Proposed Measures and Pacific Gas and Electric Company (PG&E) Construction Measures would be implemented as directed herein. With the mitigation measures identified in this IS/MND, the Project would not have the potential to substantially degrade the quality of the environment.

The Project would not directly impact or reduce the availability of habitat. The Project is proposed upon a site that has partially been subject to recurring disking and other agricultural-related disturbances, is partially used as an existing electrical substation, and does not contain special status plants or rare plants. As discussed in Section 3.4, *Biological Resources*, such areas provide limited foraging habitat. Indirect impacts to habitat areas and direct and indirect impacts to animal species are addressed through implementation of Applicant Proposed Measures (APM)-1 through APM-8; PG&E Construction Measures AMM-1, AMM-4, AMM-7, AMM-12, BMP-1;

and CEQA Mitigation Measure BIO-1. With implementation of these measures, the Project would not substantially reduce habitat or affect populations of fish, wildlife, or plant species.

As discussed in Section 3.5, *Cultural Resources*, although there are no known archaeological resources at the Project site, the Project could result in unanticipated discovery of unrecorded subsurface archaeological materials during ground disturbing construction activities. However, with implementation of the APMs (AMP-CUL 1, 2, 3 and 4) and PG&E Best Management Practices (BMP-17, BMP-18, and BMP-20), the impact would be less than significant.

As discussed in Section 3.7, *Geology and Soils*, proximity to the Great Valley thrust fault system could be a concern as it relates to seismic ground shaking. Therefore, to reduce this impact, APM GEO-2 (Supplemental Geotechnical Engineering Report) and BMP-3 would be implemented along with **Mitigation Measure GEO-1** to ensure that a fault study would be included in the required Supplemental Geotechnical Report.

Implementation of APM PALEO-1 and APM PALEO-2 (including **Mitigation Measures GEO-2 and GEO-3**) and BMP-22 would ensure that significant paleontological resources are not inadvertently destroyed as a result of the Project, and the impact on paleontological resources would be less than significant.

b) Have impacts that are individually limited, but cumulatively considerable: Less than Significant.

CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project's incremental contribution to a significant cumulative effect is "cumulatively considerable." This means that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. An incremental, project-specific contribution to a cumulative impact is less than cumulatively considerable and is not significant if, for example, the project is required to implement or fund its fair share of a mitigation measure(s) designed to alleviate the cumulative impact.

Consistent with CEQA Guidelines Section 15130(b), the CPUC has prepared a list of past, present, and reasonably foreseeable future projects that could result in related or cumulative impacts. This list includes projects outside the control of CPUC (the Lead Agency). The analysis of cumulative impacts also considers projections contained in planning documents designed to evaluate regional or area-wide conditions. Specifically, this "projections approach" is used at least in part in the cumulative analyses for air quality, greenhouse gas emissions, noise, and transportation. Resource areas (such as land use and planning, mineral resources, population and housing, public services, and recreation) for which the Project was determined through the analysis in this IS/MND to not result in an impact, would also not contribute any incremental impact under the cumulative scenario, and are not discussed further in this section. Less than significant impacts are considered in the cumulative scenario on a case-by-case basis depending on the baseline conditions and the potential incremental contribution. Existing conditions within the cumulative impacts' area of effect reflect a combination of the natural condition and the effects of past actions in the affected area. The following factors also were used to determine an appropriate list of projects to be considered in this cumulative analysis:

- **Similar Environmental Impacts** – The analysis considers “reasonably foreseeable” projects that would contribute to effects on resources also affected by the Project. These include, for example, other electric transmission, or public utility-related projects.
- **Geographic Scope** – The appropriate geographic area of cumulative analysis is identified on a resource-by-resource basis as dictated by relevant physical and/or environmental boundaries (such as the extent of the groundwater basin or the roadways traveled by Project vehicles).
- **Timing and Temporal Scope** – Incremental impacts of the Project could combine with the incremental impacts of other projects to cause or contribute to cumulative effects if the Project’s construction, operation, and maintenance periods coincide in terms of timing with the effects of the other projects.

The Project is proposed in a rural location with few urban projects in the vicinity. PG&E was contacted and provided information about recent and reasonably foreseeable projects at its existing Gates Substation. Information about other comparable projects in the geographic area was derived primarily from Fresno County’s and the City of Coalinga’s websites (Fresno County, 2021; City of Coalinga, 2021). The California Department of Transportation website was also reviewed to identify current roadway rehabilitation and associated planned construction in the Fresno County area (CalTrans, 2021). These projects are considered together along with the Project, as part of the potential cumulative scenario and are described in **Table 3.21-1** and depicted in **Figure 3.21-1**. As noted in Table 3.21-1, there are numerous utility-scale solar energy projects in the region that were either recently constructed or are currently in the planning stage. As many of these projects involve the use of heavy construction equipment and clearing of land, these projects have the potential to combine with the effects of the Project and could result in cumulative impacts, when considered together.

A discussion of cumulative impacts per resource area is provided, as follows.
Aesthetics and Visual Resources

As discussed in Section 3.1, *Aesthetics*, there would be no impact with respect to scenic resources within a state scenic highway or scenic vistas because there are none designated in the Project study area. Moreover, the Project would have a less-than-significant impact to scenic resources because the location is not one of high visual sensitivity. Therefore, the Project would not contribute to cumulative impacts regarding these considerations. Additionally, due to the isolated angles at which glare may be experienced, and the design features which would be implemented to minimize impacts (per APM AES-1 and APM AES-2) the Project’s less-than-significant impact related to light and glare would not combine with impacts from other facilities. Therefore, the Project’s impact to visual resources resulting from light and glare would not cause or contribute to a significant adverse cumulative impact.

**TABLE 3.21-1
GATES 500 kV DYNAMIC REACTIVE SUPPORT PROJECT CUMULATIVE PROJECTS LIST**

Map Key	Project Name	Location	Approximate Distance from Project Site	Description	Status
PG&E					
1	PG&E (Bank 11 Replacement-230 kV Bus E BAAH Conversion 500/230 kV - Substation)	Immediately south of the Orchard Substation site, within the existing PG&E Gates Substation property	0.0 miles from the Project (adjacent at the PG&E Gates Substation)	Replace Bank and convert the existing 230 kV double bus section E inside existing PG&E Gates Substation	Anticipated April 2023
2	PG&E Interconnection Customer (Generation)	Immediately south of the Orchard Substation site, within the existing PG&E Gates Substation property	0.0 miles from the Project (adjacent at the PG&E Gates Substation)	Installation of a 230 kV gen-tie approximately 1,800 feet in length within the northeast corner of the substation to be hung on approximately two tubular steel poles Install 230 kV bay to section "F"; potential installation of 230 kV gen-tie line within substation property; full scope is undetermined	Anticipated to have begun in December 2021 Anticipated October 2023
County of Fresno					
3	Fifth Standard Solar Complex	South Lassen Avenue, north of West Jayne, east of South Lake Avenue, and west of West Gale Avenue, approximately 3.0 miles south of the nearest city limits of Huron, CA.	0.5 miles	Fifth Standard Solar Complex: 150 MW solar PV generation facility (1,400 acres); Blackbriar Energy Storage: 20 MW energy storage facility (5 acres).	Anticipated construction between late 2020 and late 2021; and anticipated completion by December 2022
City of Coalinga					
4	Capital Improvement Projects	City of Coalinga	13 miles west of Project site	Various street improvements and trails projects	2019-2020 recently completed.
5	150 S. Hachman Street Subdivision	150 S. Hachman Street at Polk, City of Coalinga	13 miles west	0.57-acre residential subdivision	IS/MND published 2020
6	Brightsource Energy Solar to Steam Demonstration Project	S. Derreck at Gale, City of Coalinga	14.5 miles west of Project site.	Solar energy development and steam energy demonstration project	Operational
California Department of Transportation					
7	Interstate 5 (I-5) Panoche Capital Preventative Maintenance	1.9 miles north of Three Rocks Road undercrossing to 0.2 miles south of Panoche Road overcrossing at post mile 37.20 to 48.80.	25 miles north-northwest of Project	Resurfacing and rehabilitation of the north and southbound lanes, shoulders, and on-ramps and off ramps in Interstate 5 in Fresno County.	Construction is scheduled to begin Sept. 2024- and to be completed Sept 2028.

SOURCES: California Department of Transportation, City of Coalinga, Fresno County, 2021.

The geographic scope of potential cumulative impacts to the existing visual character or quality of public views includes the viewshed along I-5, SR 269, and major local roadways such as West Jayne Avenue. Recently constructed and reasonably foreseeable future projects in this geographic area include the Gates solar facilities, PG&E substation and transmission upgrades, and the (1,400 acre) Fifth Standard Solar Complex which would be located approximately 0.5 miles north of the Project. Elements of these projects would contribute to an alteration of the visual quality of the landscape and would introduce light and glare to an otherwise predominantly rural environment.

When considered in the cumulative context (that is to say in combination with the effects of these projects), the Project's contribution to cumulative effects would introduce a moderate to high level of visual change to the study area. In conjunction with the low to moderate visual sensitivity of the landscape, the Project's contribution to cumulative visual impacts would be less than significant.

Agricultural and Forestry

As discussed in Section 3.2, *Agriculture and Forestry*, the Project would result in no impact with respect to conflicts or conversion of forest land or timberland and no impact with respect to Williamson Act contracts. Therefore, the Project could not cause or contribute to any potential significant cumulative impact on these resource areas. The potential for the Project or an alternative to cause or contribute to a potential significant cumulative impact with respect to the remaining agricultural resources considerations are evaluated below.

The geographic context for potential cumulative impacts related to other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use is Fresno County.

The term "cumulative impacts" refers to two or more individual effects, which, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from multiple projects is the change in the physical environment that results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. Various projects planned by PG&E within the Gates Substation property, immediately adjacent to the Project site, as well as the Fifth Standard Solar Project Complex, located on parcels immediately the north and east of the Project site, have the potential to cause impacts that could combine with those of the Project to result in an adverse cumulative impact.

The Gates Substation is located on Farmland of Local Importance and Urban and Built-Up Land. Accordingly, the PG&E Interconnection Facilities would not contribute any direct or indirect incremental impact to cumulative conditions relating to the potential conversion of Farmland. The Fifth Standard Solar Project Complex would convert 1,600 acres of Prime Farmland to non-agricultural use (Fresno County, 2020). The EIR prepared for the Fifth Standard Solar Project Complex found significant and unavoidable impacts with respect to pressures to convert farmland to non-agricultural use through the conversion of a 1,600-acre Prime Farmland site for the

development of solar facilities, which would contribute to a significant cumulative impact on agricultural resources.

The Project would be sited so as to be contiguous with the existing (Gates Substation) and future (Fifth Standard) development. Although the Project would incrementally increase the overall area of land at this site to be converted to non-agricultural uses, the consolidation of these three sites for contiguous energy and utility-related uses would minimize the overall potential for breaking up large areas of farmland in a way that could further increase pressures to convert farmland to non-agricultural use. For example, if the Project were to be sited farther from the Fifth Standard project site, the agricultural land located between those projects would be more likely to be converted by future development proposals. Because the Project would be sited to minimize the loss of farmland and consolidate non-agricultural uses, and because its incremental impact would be less than the 10-acre threshold of significance, the Project's contribution to the overall cumulative impact would not be cumulatively considerable.

Air Quality

The geographic scope considered for cumulative impacts to air quality is the San Joaquin Valley Air Basin (SJVAB). As discussed in Section 3.3, *Air Quality*, the SJVAPCD's application of thresholds of significance for criteria pollutants is a relevant way to determine whether a project's individual emissions would have a cumulatively significant impact on air quality. Therefore, if a project would exceed the identified significance thresholds, its emissions would be cumulatively considerable, and if a project would not exceed the significance thresholds, its emissions would not be cumulatively considerable. Project-related construction activities would not exceed the identified significance thresholds. Therefore, construction of the Project would not result in a cumulatively considerable net increase in regional emissions of criteria pollutants and precursors and the associated cumulative impact would be less than significant.

As described in Section 3.2, the nearest sensitive receptors to the Project site are residences located 1.8 miles away, and the health risk impacts associated with the Project's construction TAC emissions would be less than 1 percent of the SJVAPCD significance thresholds. Therefore, the health risk from the short-term DPM emissions that would be associated with construction of the Project would not be cumulatively considerable, and the cumulative impact would be less than significant. With respect to impacts associated with Valley Fever from exposure to construction-related fugitive dust, SJVAPCD Rule 8021 would require the Project to reduce visible dust emissions to less than 20 percent opacity. APM AQ-2 (Dust Control Plan) and APM AQ-3 (Valley Fever Worker Awareness Training) and PG&E BMP-6 (Fugitive Dust General) and BMP-7 (San Joaquin Valley AQMD >1 acre of soil disturbing activities) would place the Project in compliance with these regulatory requirements and would ensure that the Project's contribution to cumulative impacts from Valley Fever would be less than cumulatively considerable.

Construction of the Project would cause a less-than-significant impact related to the generation of odors from diesel equipment emissions because construction activities would be intermittent and spatially dispersed, and associated odors would dissipate quickly and would not be noticeable at the nearest sensitive receptor location approximately 1.8 miles away from the Project site. There

is no existing adverse cumulative condition related to odors to which the Project could contribute. Projects in the cumulative scenario are not expected to cause diesel-related odors that would substantially intermingle with those of the Project and thereby cause a significant cumulative effect. The cumulative impact would be less than significant.

Long-term operation and maintenance of the Project would not cause emissions that would exceed the operational significance thresholds (see Section 3.3.4). Therefore, the Project's contribution to the cumulative impact would not be cumulatively considerable and the cumulative impact would be less than significant.

Biological Resources

Cumulative effects are caused by the incremental impact of a proposed project combines with the impacts of other closely related past, present, and reasonably foreseeable probable future projects. The ongoing impacts of past projects (such as Brightsource Energy in Coalinga) generally are reflected in the existing environmental setting described above. In this context, the cumulative effects of the Project and alternatives in combination with the incremental impacts of present and reasonably foreseeable probable future projects in the cumulative scenario are analyzed below.

As stated above, implementation of the Project would result in no impact to riparian habitat or other sensitive natural communities; protected wetlands; local ordinances; or HCPs and NCCPs. Accordingly, the Project would not cause or contribute to any significant cumulative impact relating to these elements.

The geographic scope of this cumulative analysis includes the regional population or corridor extent for the species or community affected, or the extent of the local watershed, in the case of impacts to aquatic resources. The list of projects considered for cumulative analysis is provided in Table 3.21-1 and depicted on Figure 3.21-1. The temporal scope of cumulative analysis is the life of the proposed facility and associated infrastructure.

Special-Status Species

Project impacts on San Joaquin kit fox from the Project after the implementation of APMs would be less than significant. Identified cumulative projects include PG&E projects within the existing substation, which does not represent foraging habitat for any special-status species, residential development in Coalinga, and the Fifth Standard solar project 0.5-mile distant, which may result in direct impacts to kit fox as well as the removal of potential kit fox movement or foraging habitat. However, all of these projects are located outside of the Coast Range and outside of the Ciervo-Panoche core area for San Joaquin kit fox, which occurs west of I-5 (USFWS 2010). The Project is located east of I-5. Additionally, all of the "link" habitat for San Joaquin kit fox populations that is identified in the USFWS (2010) 5-year review occurs west of I-5. The Project and the cumulative solar project both would occur within a dense agricultural landscape that is regularly disked, and therefore generally poorly suited as refugia habitat. Because so much of the lands east of I-5, including those surrounding the cumulative projects, are cultivated with few habitat islands for kit fox, the changed land uses and potential impacts on kit fox transit and foraging would be a less-than-significant impact. Therefore, the contribution of the Project to impacts on this species would not be cumulatively considerable.

Project impacts to common raptors and other nesting birds after implementation of APMs would be less than significant. APMs would protect any common raptor and other bird nests within the study area from disturbance during construction. The identified cumulative solar, energy, residential and transportation projects in Table 3.21-1 also have the potential to impact suitable nesting and foraging habitat for raptors. However, the total area of these existing and proposed cumulative projects is less than 1,500 acres. The Project itself is approximately 20 acres. Therefore, the Project, in combination with all identified cumulative projects, would not result in a cumulatively considerable impact to any raptors.

Impacts on common and special-status migratory birds for the duration of transmission line operation would be less than significant for the Project. The existing and proposed solar facilities, energy projects and residential development listed as cumulative projects also have the potential to cause impacts to special-status birds, including injury and mortality associated with collisions. Ultimately, cross-facility and cross-taxon meta-analyses would be necessary to fully understand the cumulative impacts of energy infrastructure on birds (Smith and Dwyer 2016). However, because the projects considered in this analysis are distant from the Mendota Wildlife Area stopover site, they are expected to attract little flyover traffic from migratory birds, and the level of avian fatalities that would occur at these sites is unknown. In addition, compliance with required mitigation would ensure that this Project adheres to current APLIC design standards for overhead powerlines and associated structures (including use of avian-safe line designs, and installation of devices to make powerlines visible to birds), which would minimize the potential for avian injury and mortality from collisions and electrocution with such facilities. Because of these factors, the incremental effects of the Project on overall avian fatality from collision risk in the Central Valley would not be cumulatively considerable.

Wildlife Corridors

This Project would have less-than-significant impacts on wildlife movement due to its small size and location. The site is not an important wildlife movement corridor due to the surrounding areas being heavily used for agriculture and solar development. There is no existing significant cumulative impact on wildlife movement, and the incremental impacts of the Project, in combination with other present and reasonably foreseeable future projects in the cumulative scenario, would not cause one.

Cultural Resources

The geographic scope for cumulative effects on cultural resources includes the immediate vicinity of locations where the Project could cause disturbance to historical resources, unique archaeological resources, and/or human remains. As the Project would not have an impact on historical resources of the built environment there would be no cumulative impact. There are no known archaeological resources qualifying as historical resources or unique archaeological resources in the study area and there would be no cumulative impact on known resources. Similar to the Project, cumulative projects in the vicinity could have a significant impact on previously undiscovered archaeological resources, including human remains interred outside of formal cemeteries, during ground-disturbing activities. The potential impacts of the Project when considered together with similar impacts from other probable future projects in the vicinity could result in a significant cumulative impact on buried archaeological resources or human remains.

However, implementation of APMs and BMPs, which would require a worker environmental awareness training for cultural resources, monitoring during Project construction in the study area, and that work halt in the vicinity of a find until it is evaluated, and in the case of human remains the County Coroner is contacted. In addition, cumulative projects undergoing CEQA review would have similar types of training and monitoring programs, and inadvertent discovery measures. Therefore, with implementation of the APMs and BMPs, the Project's contribution to cumulative impacts would not be considerable, and the impact would be less than significant.

Energy

As discussed in Section 3.6, *Energy*, there would be no impact with respect to conflicts with, or obstruction of, a state or local plan for renewable energy or energy efficiency. Therefore, the Project would not cause or contribute to any potential significant cumulative impact in this regard. The potential for the Project to cause or contribute to a potential significant cumulative impact with respect to the remaining energy-related consideration is evaluated below.

The geographic context for potential cumulative impacts related to electricity use is within PG&E's service area and for equipment and vehicle fuel use is within the Project's construction equipment delivery and workers' average travel radius since these are the areas within which energy resources would be supplied for the Project. The Project would use energy resources during initial construction, operation and maintenance, and decommissioning; therefore, it could contribute to potential cumulative impacts during any of these phases as well.

Regarding electricity, there is no existing significant adverse condition that would be worsened or intensified by the Project. To the contrary, the Project would allow for more efficient transmission and use of energy that would be generated within the PG&E system and would contribute to electrical grid reliability. No significant adverse cumulative effect associated with wasteful, inefficient, or unnecessary consumption would result relating to electricity use; instead, a beneficial cumulative impact related to efficient transmission of electricity and grid stability would result.

Similarly, regarding the efficiency of fuel use, there is no existing significant adverse condition (such as a shortage) that would be worsened or intensified by the Project. The past, present, and reasonably foreseeable future projects described in Section 3.21 (Figure 3.21-1) in close proximity of the Project site could require gasoline or diesel but would not combine with the fuel demands of the Project to cause a significant adverse cumulative impact relating to the wasteful, inefficient, or unnecessary consumption or use of fuel. In the event of a future shortage, higher prices at the pump would curtail unnecessary trips that could be termed "wasteful" and would moderate choices regarding vehicles, equipment, and fuel efficiency. Under these conditions, the Project's less-than-significant impact relating to wasteful, inefficient, or unnecessary consumption or use of fuel would not be cumulatively considerable.

Geology and Soils

As discussed in Section 3.7, *Geology and Soils*, the Project would not cause any impact with respect to landslides or alternative wastewater disposal. Therefore, neither could cause or contribute to any potential significant cumulative impact regarding these considerations. The potential for the Project to cause or contribute to a potential significant cumulative impact with

respect to the remaining geology, soils, or paleontological resources considerations is evaluated below.

Impacts related to geology, soils, and seismicity tend to be site-specific and depend on the local geology and soil conditions. For these reasons, the geographic scope for potential cumulative impacts consists of the Project site and adjacent areas. The Project could cause or contribute to cumulative effects for the duration between the onset of project activities to the conclusion of decommissioning and site restoration.

The Project site is subject to strong, seismically induced ground shaking (potentially surface fault rupture); however, as discussed in the analysis, the Project would be designed and constructed in accordance with the most current building code requirements (in accordance with APM GEO-1 and APM GEO-2), and the potential for the Project to exacerbate seismic hazards would be less than significant. State and local building regulations and standards have been established to address and reduce the potential for projects to cause or exacerbate seismic hazard impacts. Any projects occurring in proximity to the Project would be required to comply with the same applicable provisions of these laws and regulations. Compliance with these requirements would limit the potential for impacts to a less-than-significant level. The purpose of the CBC (and related local ordinances) is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Based on compliance with these requirements, the incremental impacts of the Project combined with impacts of other projects in the area would not combine to cause a significant cumulative impact related to seismic hazards.

If site drainage is not managed properly, drainage from the Project site in combination with drainage from other project sites could cause soil erosion or loss of topsoil at a local and regional level. As with the Project, any other ongoing projects would be required to comply with existing codes, standards, and permitting requirements (e.g., preparation of a SWPPP under the state construction general permit) to reduce erosion impacts, which is also required by APM WQ-1 and APM WQ-2. Potential Project-related impacts related to soil erosion and loss of topsoil would be reduced through implementation of the BMPs identified in the SWPPP. Requirements in the state construction general permit are designed to reduce adverse cumulative effects of erosion and sedimentation. Compliance with stormwater control requirements would reduce the overall cumulative impact to a less-than-significant level.

The geographic scope of cumulative impacts on paleontological resources includes the Project site and adjacent areas where deposits with a high potential to contain paleontological resources could be disturbed. If paleontological resources extend across areas of ground disturbance of the proposed Project and cumulative projects, the projects could result in the loss of paleontological resources, a potentially significant impact. However, with implementation of APM PALEO-1, APM PALEO-2, Mitigation Measure GEO-2, and Mitigation Measure GEO-3 the Project would effectively avoid the potential loss of paleontological resources by requiring worker awareness training, stopping work in the event of inadvertent discovery during construction, monitoring when necessary, and implementing proper salvage and treatment protocols. Additionally, BMP-20, BMP-21, and BMP-22 would be implemented during construction of the PG&E

Interconnection Facilities to ensure there is no impact to significant paleontological resources during that phase of the Project. Therefore, while implementation of cumulative projects could have a significant effect related to paleontological resources, the Project's contribution to such an effect would be less than significant.

Greenhouse Gas Emissions

The California Air Pollution Control Officers Association considers GHG impacts to be exclusively cumulative impacts (CAPCOA, 2008); therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. Although the geographic scope of cumulative impacts related to GHG emissions is global, this analysis focuses on impacts associated with potential conflicts with California's reduction goals set forth in SB 32 and the Project's direct and/or indirect generation of GHG emissions. The Project would result in less-than-significant emissions of GHGs and would not conflict with the state's GHG reduction goals. Therefore, the Project-specific incremental impact associated with GHG emissions would not contribute to a significant cumulative impact, and the incremental impact would not be cumulatively considerable.

Hazards and Hazardous Materials

The geographic scope for cumulative effects relating to hazards and hazardous materials would be the air basin, watershed boundary, groundwater basin, a quarter-mile radius beyond the Project site boundary, and the regional materials delivery routes. Cumulative hazards and hazardous materials-related effects could arise at any point during Project construction or operation and maintenance-related activities. The Project would have no impact related to the release of hazardous emissions and/or materials in proximity to a school, being included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or the Project resulting in a safety hazard or excessive noise due to being within two miles of an airport. Therefore, the Project would not cause or contribute to any cumulative impact related to these aforementioned potential impacts. No impact would occur.

The Project would result in a less-than-significant impact regarding the transport, use, disposal of hazardous materials; and upset and accident conditions involving the release of hazardous materials. Current and reasonably foreseeable projects would be required to comply with the same federal, state, and local regulatory requirements described above that would minimize and/or avoid such impacts. Compliance with these regulations is effective in minimizing releases where emissions or accidental releases tend to be localized and do not combine to become cumulatively considerable. Therefore, considering the localized nature of effects, the temporal and geographic variations in occurrences, any emissions or incidents would be unlikely to combine to become a significant cumulative impact. Similar regulations would be in place to regulate traffic conditions and fire safety issues caused by other projects.

Accordingly, the Project's incremental impact would not cause or contribute to any significant cumulative impact regarding the transport, use, disposal, or accidental release of hazardous materials; or causing fire and traffic safety impacts. The cumulative impact would be less than significant.

Hydrology and Water Quality

The geographic scope of analysis of cumulative effects includes the Project site, affected waterways, and surrounding watersheds and aquifers potentially affected by site clearing, construction, O&M, and decommissioning of the Project. The cumulative development for water quality includes all development within the Basin Plan; the cumulative context for groundwater is the Westside Subbasin boundary. Consideration of the cumulative scenario includes effects of past projects within and surrounding the Project site, as well as current and reasonably foreseeable activities that, similar to the Project, have an influence on land contours and hydrology across the landscape. This analysis considers the incremental effects of the Project to determine whether, when added to the effects of other projects in the cumulative scenario, the Project would cause or contribute to significant cumulative effects.

The temporal scope of construction-related cumulative effects is the 10- to 14-month construction period. The temporal scope for cumulative O&M-related activities is assumed to be permanent or ongoing.

The Project's incremental impacts would be reduced through implementation of various measures to protect waterways and water quality involving compliance with water quality standards or waste discharge requirements and best management practices. Therefore, when considered in combination with the effects of other projects, the Project's incremental contribution to potential significant cumulative effect would not be cumulatively considerable.

In the absence of requirements governing water quality, the Project, in combination with other past, present, and reasonably foreseeable future development in the Tulare Basin Plan area watersheds, would continue to contribute runoff and discharges that contain constituents from agriculture, industrial, and urban land uses. Likewise, activities could continue to affect groundwater quality in the Westside Subbasin, which would be considered a potentially significant cumulative impact. Recognizing the potential for ongoing impacts on water quality in the Basin Plan area, inclusive of the Westside subbasin area, regular updates to the Basin Plan and associated water quality regulations are implemented. Such regulations, respective of *state anti-backsliding requirements, would presumably be as effective as or more effective than* current water quality requirements (such as those listed in Section 3.10.2, *Regulatory Setting*).

As described in Section 3.10, Hydrology and Water Quality, development under the Project would include construction, operation, and decommissioning activities that could result in the degradation of surface water and groundwater quality. The Project, as with other projects in the cumulative scenario, would be required to comply with the current and future Basin Plan, applicable NPDES permit requirements and ordinances, and other water quality regulations. These regulatory requirements and the design of the Project would reduce the incremental contribution to the cumulative impact to a less-than-considerable level.

The Project, in combination with other past, present, and future development in the Westside Subbasin area, may require the use of groundwater for construction. Groundwater pumping would be regulated by the effective Westside Subbasin GSP. The effective GSP is a programmatic cumulative water use scenario that includes a consideration of long-term management for

sustainability of the subbasin. Because the Project would not deplete groundwater or require long-term groundwater sources, the Project's impact, when considered in combination with impacts from other projects, would not be cumulatively considerable. The cumulative impact would be less than significant.

Noise and Vibration

Noise is a local impact. The geographic scope considered for potential cumulative impacts related to noise is the area within 0.5 miles of the Project site because sounds naturally attenuate with distance and topography. The temporal scope for cumulative noise impacts is the construction, operation/maintenance, and decommissioning phases of the Project. Given the absence of sensitive receptors in the vicinity of the Project site, and the long distance (1.8 miles) separating the Project site from the nearest residential receptors, noise from the Project during construction or operation would not cumulatively combine with any other projects proposed in the area to result in significant noise impacts. The Project's contribution to any cumulative noise increase at the nearest residential receptors would not be considerable, and the associated cumulative impact would be less than significant.

Transportation

Cumulative impacts related to transportation and circulation resulting from the Project would be limited to construction impacts. Cumulative construction in the Project vicinity may be anticipated to include regional roadway projects, which in combination with construction traffic from the Project, could have a temporary significant effect on Project area roadways. Known projects that could be anticipated to have construction phases that would overlap with the Project would include the I-5 Panoche Capital Preventative Maintenance project and the Pile Repair at Firebaugh and Buttonwillow Bridges projects. The I-5 Panoche Capital Preventative Maintenance project would include resurfacing of the northbound and southbound mainline, on-ramps and off-ramps, and associated infrastructure, along a stretch of I-5 north of the Project site. The Pile Repair at Firebaugh and Buttonwillow Bridges projects would rehabilitate existing roadway bridges at SR 180 north of the Project site and at sites south of the Project area. These projects, in combination with the Project, could be anticipated to contribute to substantial delays at roadway intersections, segments of I-5, and at freeway interchanges.

Implementation of the proposed traffic control plan, pursuant to APM TRA-1 (see Table 2-8 in Chapter 2), would implement measures to control construction traffic-related impacts associated with the Project, so as to minimize traffic congestion and potential vehicular conflicts and maintain traffic safety, in accordance with County policies. To reduce construction worker vehicle trips, APM GHG-1 includes a provision to encourage construction workers to utilize suitable park-and-ride facilities and carpool to the Project site. The implementation of these measures as part of the Project would be anticipated to limit the Project's contribution to temporary roadway congestion and maintain traffic safety, in compliance with local, state, and federal policies and regulations related to transportation. With the implementation of APMs TRA-1 and GHG-1, construction-related cumulative transportation impacts would be considered less than cumulatively considerable and would not be anticipated to conflict with relevant federal, state, and local transportation policies, plans, and standards.

VMT impacts are considered and managed on a regional level. Regional VMT thresholds are identified based on regional VMT goals. Thus, VMT impacts from individual projects that are determined to be less than significant, based on regional VMT thresholds, are considered to have a less than cumulatively considerable impact. The Project is anticipated to generate fewer than 500 ADT, the qualitative screening threshold below which projects are considered to have a less-than-significant VMT impact under the Fresno COG Regional Guidance. Therefore, the Project's cumulative impact under this criterion would be less than significant.

Tribal Cultural Resources

The geographic scope for cumulative effects on tribal cultural resources includes the immediate vicinity of locations where the Project could cause disturbance to tribal cultural resources. Similar to the Project, cumulative projects in the vicinity could have a significant impact on previously undiscovered archaeological resources and human remains, which could be considered tribal cultural resources, during ground-disturbing activities. The potential impacts of the Project when considered together with similar impacts from other probable future projects in the vicinity could result in a significant cumulative impact on tribal cultural resources. However, APMs and BMPs would be implemented, which require a worker environmental awareness training for cultural resources; monitoring during Project construction in the study area; that work halt in the vicinity of a find until it is evaluated; and in the case of human remains, that the County Coroner be contacted. In addition, cumulative projects undergoing CEQA review would have similar types of training and monitoring programs, and inadvertent-discovery measures. Therefore, with implementation of the APMs and BMPs, the Project's contribution to cumulative impacts would not be considerable, and the impact would be less than significant.

Utilities and Service Systems

The Project would have a less-than-significant impact related to utilities and service systems, associated with the construction of water, wastewater, stormwater, and telecommunication facilities primarily internal to the Project site. This analysis considers the contribution of impacts on utilities and service systems that could be generated by the Project, while viewed in combination with other past, recent, and reasonably foreseeable future projects.

Potential cumulative impacts on landfill capacity would affect the area served by the Avenal landfill. The Project would generate approximately 360 cubic yards of waste during construction, O&M, and decommissioning (see Table 2-3 in Chapter 2, *Project Description*). If the American Avenue Landfill is not available during O&M and decommissioning, the Project would need to use an alternate approved location to dispose of solid waste. As noted in Section 3.19.2, *Regulatory Setting*, in the discussion of the Integrated Waste Management Act, Fresno County is required to identify an area for the location of new solid waste transformation or disposal facilities if the County determines that the existing capacity (Avenal landfill) will be exhausted in 15 years.

In compliance with the Integrated Waste Management Act, it is anticipated that the Avenal Landfill would have at least 15 years of remaining capacity at the time of decommissioning and reclamation. and that waste could be disposed of within the limits of available permitted capacity. The Project would be subject to the CalGreen Code requirements in effect at the time of decommissioning, which would ensure that an appropriate percentage of debris would be diverted from the landfill.

The same requirements for waste diversion and recycling that would apply to the Project would also apply to other cumulative projects. For this reason, the cumulative scenario for solid waste is not expected to exceed the permitted capacity of available landfills and the Project's incremental contribution to capacity concerns would not be cumulatively significant.

Water demand during Project construction (for dust suppression and site work) would be a minimal amount in comparison to WWD's overall water supply. This demand would be met by WWD and managed by WWD in consideration of long-term supplies. Water demand for other projects would also be managed by WWD to ensure that sufficient supplies would be available to meet their water demands. For these reasons, the Project would not have a cumulative impact on demand for groundwater resources.

Wildfire

As discussed in Section 3.20, *Wildfire*, there would be no impact with respect to the potential for the Project to change or alter drainage patterns or result in slope instability from post-fire conditions. Therefore, the Project would not contribute to any cumulative impact to post-fire related drainage changes or erosion impacts. The potential for the Project to cause or contribute to a potential significant cumulative impact with respect to the remaining wildfire considerations is evaluated below.

The geographic scope for potential cumulative impacts to wildfire encompasses the Project site and the surrounding conditions that could contribute to the fire environment and nearby evacuation routes. Cumulative projects surrounding the Project site that could contribute to wildfire risk consist of primarily California Department of Transportation (Caltrans) maintenance and upgrade projects. Construction of the Caltrans cumulative projects would involve an additional ignition source due to vehicle and equipment use and could result in temporary traffic changes and road closures. However, due to the Caltrans cumulative projects' locations, no road closures or traffic route changes would interfere or limit any emergency plans or evacuation routes near the Project. Although construction of cumulative projects could result in additional ignition sources from vehicles and equipment use, current environmental conditions in the geographic scope for cumulative effects are also not conducive to the rapid spread of uncontrolled wildfire due to flat topography, minimal vegetation, and lack of fire history within the surrounding Project site. Therefore, in combination with other projects in the vicinity, the Project could incrementally increase the potential for ignition sources in the area. However, given the flat topography and lack of vegetation within the geographic scope of cumulative impacts, the impact of an increase in ignition sources of the Project in combination with the incremental impacts of other projects would be less than significant. There is no existing significant cumulative impact, and the Project's incremental, less-than-significant contributions when combined with the incremental impacts of other projects in the cumulative scenario would not cause one. Cumulative impacts would be less than significant.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly: *Less than Significant.*

The Project would not expose sensitive receptors to substantial pollutant concentrations, nor would it generate other emissions (such as objectionable odors) adversely affecting a substantial

number of people. As discussed in Section 3.3, *Air Quality*, because the maximum daily emissions would be below the screening threshold for an ambient air quality analysis, the Project would not contribute to local exceedances of the national or California air quality standards. As mentioned, these standards are established at health protective levels and include an adequate margin of safety. Therefore, the Project construction and operational emissions would not be anticipated to result in an adverse health effect with respect to criteria air pollutants. Moreover, the Project is not proposed to be located in a populated area. There are no sensitive receptors near the Project. The nearest sensitive receptor is approximately 1.8 miles from the Project site. Therefore, the Project's construction or operational activities do not pose a direct or indirect health risk to area receptors.

As described in Section 3.9, *Hazards and Hazardous Materials*, specific measures proposed by the Applicant (APMs HAZ-1 through HAZ-4, WQ-1, WQ-2, PS-1, and TRA-1) and by PG&E (BMP-8, BMP-9, BMP-10, BMP-11) have been incorporated into the Project to ensure that the Project would comply with regulatory requirements with respect to hazardous materials management, storage, transport, and spill containment and countermeasures control, among other APMs and BMPs (proposed by the Applicant and PG&E, respectively) that would be implemented to reduce effects, that could otherwise, directly or indirectly, affect humans beings.

Similarly, as discussed in Section 3.10, *Hydrology and Water Quality*, the Project's incremental impacts would be reduced through implementation of various measures (as noted in the section) to protect waterways and comply with water quality standards. The Project (along with other construction projects that disturb one or more acres of soil) would be subject to the requirements of the construction general permit and would implement SWPPP(s) including specific measures to control erosion and limit impacts to stormwater and receiving waters. Therefore, when considered in combination with the effects of other projects, the Project's incremental contribution would be limited and would not be cumulatively considerable.

As described in Section 3.17, *Transportation*, a traffic control plan (per APM TRA-1) would be implemented as part of the Project, which would minimize traffic congestion and potential vehicular conflicts and to maintain traffic safety during construction. With implementation of such measures, the Project's potential impacts pertaining to public safety and emergency access would be reduced. Therefore, the Project would not cause or result in a significant adverse effect to human beings either directly or indirectly. The impact would be less than significant.

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CHAPTER 4

List of Preparers

Report Authors

Lead Agency

California Public Utilities Commission

505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Boris Sanchez CPUC Infrastructure Permitting and CEQA Energy Division

Consultants

Prime Consultant

Environmental Science Associates (ESA)

1425 North McDowell Blvd. Ste. 200
Petaluma, California 94954

Michael Manka	Project Manager
Julie Watson	Public Engagement, Population and Housing
Matthew Fagundes	Deputy Project Manager, Air Quality, Noise
Maria Hensel	Project Coordinator, Aesthetics and Visual Resources, Hydrology and Water Quality, Utilities, Mandatory Findings of Significance
Brian Pittman	Biological Resources
Cory Barringhaus	Agriculture and Forestry, Land Use
Liza Ryan	Biological Resources
Heidi Koenig	Cultural and Tribal Cultural Resources
Dave Davis, AICP	Aesthetics and Visual Resources
Michelle Le	Energy, Greenhouse Gas Emissions
Brandon Carroll	Geology, Soils, and Paleontological Resources, Hazards and Hazardous Materials, and Mineral Resources
Michael Burns	Geology, Hazards and Hazardous Materials, Hydrology and Water Quality
Jyothi Iyer	Noise and Vibration

Jessica O'Dell	Population and Housing, Recreation
Deja Newton	Public Services, Utilities
Alexandra Sung-Jereczek	Wildfire
Alexandra Thompson	Agriculture and Forestry, Public Services, Wildfire
Jon Teofilo	Transportation
Shadde Rosenblum	Transportation
Sarah Patterson	Air Quality, Greenhouse Gas Emissions
Chris Easter	Air Quality, Greenhouse Gas Emissions
Monica Strauss	Cultural and Tribal Cultural Resources
Janna Scott	Project Director

Sub Consultants

The Sohagi Law Group, PLC
11999 San Vicente Blvd., Suite 150
Los Angeles, California 90049-5136

CHAPTER 5

Mitigation Monitoring, Compliance, and Reporting Program

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STATE OF CALIFORNIA

Gavin Newsom, Governor

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

LS Power Grid California, LLC – Gates 500 KV Dynamic Reactive Support Project (APPLICATION NO. A.21-02-018)

Introduction

This document describes the mitigation monitoring, compliance, and reporting program (MMCRP) for ensuring the effective implementation of the mitigation measures required for the California Public Utilities Commission (CPUC) approval of the LS Power Grid California, LLC's (LSPGC's) application to construct, operate and maintain the Gates 500 KV Dynamic Reactive Support Project (Project). The MMCRP includes all measures proposed by LSPGC also referred to as Applicant Proposed Measures (APMs), and all mitigation measures identified by the CPUC to reduce potentially significant impacts to less-than-significant levels. All APMs and mitigation measures are presented in **Table 5-1** provided at the end of this MMCRP.

If the Project is approved by the CPUC, this MMCRP would serve as a self-contained general reference for the Mitigation Monitoring, Compliance, and Reporting Program adopted by the CPUC for the Project. If and when the Project is approved by the Commission, the CPUC will compile the Final Plan from the Mitigation Monitoring Program in the Final Mitigated Negative Declaration (MND), as adopted.

LS Power Grid California, LLC – MMCRP Authority

The California Public Utilities Code in numerous places confers authority upon the CPUC to regulate the terms of service and the safety, practices, and equipment of utilities subject to its jurisdiction. It is the standard practice of the CPUC, pursuant to its statutory responsibility to protect the environment, to require that mitigation measures stipulated as conditions of approval are implemented properly, monitored, and reported on. In 1989, this requirement was codified statewide as Section 21081.6 of the Public Resources Code. Section 21081.6 requires a public agency to adopt a reporting or monitoring program when it adopts a mitigated negative declaration for a project that could have potentially significant environmental effects. California Environmental Quality Act (CEQA) Guidelines Section 15097 was added in 1999 to further clarify agency requirements for mitigation monitoring and reporting.

The purpose of a MMCRP is to ensure that measures adopted to mitigate or avoid significant impacts of a project are implemented. The CPUC views the MMCRP as a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance, and reporting activities of the CPUC and any monitors it may designate.

The CPUC will address its responsibility under Public Resources Code Section 21081.6 when it takes action on LSPGC's application. If the CPUC approves the application, it also will adopt a MMCRP that includes the mitigation measures ultimately made conditions of approval by the CPUC. Because the CPUC must decide whether or not to approve the LSPGC application and because the application may cause either direct or reasonably foreseeable indirect effects on the environment, CEQA requires the CPUC to consider the potential environmental impacts that could occur as the result of its decision and to consider mitigation for any identified significant environmental impacts.

If the CPUC approves LSPGC's application to construct and operate the Orchard Substation, LSPGC would be responsible for implementation of all of the Applicant Proposed Measures (APM) and all mitigation measures governing the construction, operation, and maintenance of the Project. The PG&E Interconnection facilities are analyzed in the IS/MND because, combined with the Orchard Substation Facility, they constitute the Project being evaluated under CEQA. However, the PG&E Interconnection Facilities are not part of this application proceeding and will not be authorized under this specific CPUC's decision. Though other federal, State, and local agencies would have permit and approval authority over some aspects of the Project, the CPUC would continue to act as the lead agency for monitoring compliance with all mitigation measures required by the adopted IS/MND. All approvals and permits obtained by LSPGC would be submitted to the CPUC prior to commencing the activity for which the permits and approvals were obtained.

In accordance with CEQA, the CPUC reviewed the impacts that would result from approval of the application. The activities considered include construct and operate the Orchard Substation which would consist of a +/- 848¹ million volt-amperes, reactive (MVAR) dynamic reactive device to be installed in a minimum of two, equally sized Static Synchronous Compensator² (STATCOM) units that would be independently connected to the existing Pacific Gas and Electric Company's (PG&E) Gates 500 kV Substation. Connection to the PG&E Gates Substation would require PG&E to construct and operate two single-circuit 500 kV interconnection transmission lines from the Gates Substation 500 kV bus to the Orchard Substation 500 kV take-off towers.

The CPUC review concluded that implementation of the Project would not result in any significant unmitigable impacts. All potential impacts would be mitigated to less-than-significant levels or would be less than significant. LSPGC has agreed to incorporate all the CPUC-recommended mitigation measures into the Project. The CPUC has included the stipulated

¹ The designation "±" indicates both leading (capacitive) and lagging (inductive) reactive power.

² A STATCOM device provides or absorbs reactive current to regulate voltage on electricity transmission networks.

mitigation measures as conditions of approval of the application and has circulated an IS/proposed MND for public review.

Because the CPUC must decide whether or not to approve the LSPGC application and because the application may cause either direct or reasonably foreseeable indirect effects on the environment, CEQA requires the CPUC to consider the potential environmental impacts that could occur as the result of its decisions and to consider mitigation for any identified significant environmental impacts.

The attached IS/MND presents and analyzes potential environmental impacts that would result from construction, operation, and maintenance of the Project, and recommends mitigation measures as appropriate. Based on the IS/MND, approval of the application would have no impact or less than significant impacts in the following areas:

- Aesthetics
- Agriculture and Forestry
- Air Quality
- Cultural Resources
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal and Cultural Resources
- Utilities and Service Systems
- Wildfire

The IS/MND indicates that approval of the application would result in potentially significant impacts in the areas listed below, and so identifies APMs and mitigation measures that have been accepted by LSPGC to reduce the significance below established thresholds.

- Biological Resources
- Geology and Soils

Roles and Responsibilities

As the lead agency under CEQA, the CPUC is required to monitor the Project to ensure that the required mitigation measures and all APMs are implemented, as described in the IS/MND. The CPUC will be responsible for ensuring full compliance with the provisions of this MMCRP and has primary responsibility for implementation of the monitoring program. The purpose of the monitoring program is to document that the mitigation measures and APMs required and relied upon by the CPUC are implemented and that mitigated environmental impacts are reduced to a less-than-significant level. The CPUC has the authority to halt any activity associated with the Project if the activity is determined to be a deviation from the approved Project or the adopted APMs and mitigation measures.

The CPUC may delegate duties and responsibilities for monitoring to other mitigation monitors or consultants as deemed necessary. The CPUC will ensure that the person(s) delegated any duties or responsibilities are qualified to monitor compliance.

The CPUC, along with its mitigation monitor, will ensure that any variance process, which will be designed specifically for the Project, or deviation from the procedures identified under the monitoring program is consistent with CEQA requirements; no Project variance will be approved by the CPUC if it creates new significant environmental impacts. As defined in this MMCRP, a variance should be strictly limited to minor Project changes that will not trigger other permit requirements, that does not increase the severity of an impact or create a new impact, and that clearly and strictly complies with the intent of the mitigation measure. A change to the Project that has the potential for creating significant environmental effects will be evaluated to determine whether supplemental CEQA review is required. Any proposed deviation from the approved Project and adopted mitigation measures, including correction of such deviation, shall be reported immediately to the CPUC and the mitigation monitor assigned to the construction for their review and CPUC approval. In some cases, a variance also may require approval by a CEQA responsible agency.

Enforcement and Responsibility

The CPUC is responsible for enforcing the procedures for monitoring through the environmental monitor. The environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CPUC. The CPUC has the authority to halt any construction, operation, or maintenance activity associated with the Project if the activity is determined to be a deviation from the approved Project or adopted APMs or mitigation measures. The CPUC may assign its authority to its environmental monitor.

Mitigation Compliance Responsibility

LSPGC is responsible for successfully implementing all of the adopted APMs and mitigation measures in this MMCRP. The MMCRP contains criteria that define whether mitigation is successful. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

LSPGC shall inform the CPUC and its mitigation monitor in writing of any mitigation measures that are not or cannot be successfully implemented. The CPUC in coordination with its mitigation monitor will assess whether alternative mitigation is appropriate and specify to LSPGC the subsequent actions required.

Dispute Resolution Process

The MMCRP is expected to reduce or eliminate potential disputes between CPUC staff and the applicant concerning implementation of the adopted mitigation measures. Issues should first be addressed informally at the field level between the CPUC Environmental Monitoring Team and the LSPGC Environmental Compliance Team with questions that may be raised to the LSPGC Project Manager or Construction Manager, as necessary. Should the issue not be resolved at the field level, the following procedure will be observed for dispute resolution between CPUC staff and the applicant:

- Disputes and complaints should be directed first to the CPUC's designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the approved Project or MMCRP.

General Monitoring Procedures

Mitigation Monitor

Many of the monitoring procedures will be conducted during the construction phase of the Project. The CPUC and the mitigation monitor are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with LSPGC. To oversee the monitoring procedures and to ensure success, the mitigation monitor assigned to the construction must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The mitigation monitor is responsible for ensuring that all procedures specified in this MMCRP are followed.

Construction Personnel

A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures and APMs require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures included in this MMCRP, will be taken:

- LSPGC shall require all contractors to comply with the conditions of Project approval, including all applicable APMs and mitigation measures.
- One or more pre-construction meetings will be held to inform all and train construction personnel about the requirements of the MMCRP.
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all APMs and mitigation measures requiring their attention.

General Reporting Procedures

Site visits and specified monitoring procedures performed by other individuals will be reported to the mitigation monitor assigned to the construction. A monitoring record form will be submitted to the mitigation monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the mitigation monitor. A checklist will be developed and maintained by the mitigation monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The mitigation monitor will note any problems that may occur and take appropriate action to rectify the problems. LSPGC shall provide the CPUC with written quarterly reports of the Project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the Project. Quarterly reports shall be required as long as mitigation measures are applicable.

Public Access to Records

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CPUC on request. The CPUC and LSPGC will develop a filing and tracking system

Condition Effectiveness Review

In order to fulfill its statutory mandates to mitigate or avoid significant effects on the environment and to design a MMCRP to ensure compliance during project implementation (Pub. Res. Code §21081.6):

- The CPUC may conduct a comprehensive review of conditions which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the Dispute Resolution procedure outlined above; and
- If in either review, the CPUC determines that any conditions are not adequately mitigating significant environmental impacts caused by the project, or that recent proven technological advances could provide more effective mitigation, then the CPUC may impose additional reasonable conditions to effectively mitigate these impacts.

These reviews will be conducted in a manner consistent with the CPUC's rules and practices.

Mitigation Monitoring, Compliance, and Reporting Program

The table attached to this MMCRP presents a compilation of the adopted APMs and mitigation measures in the IS/MND. The purpose of the table is to provide a single comprehensive list of impacts, mitigation measures, adopted APMs, monitoring and reporting requirements, and timing. LSPGC proposed APMs to minimize environmental impacts associated with implementation of the Project. In some instances, those APMs have been superseded by CPUC-recommended mitigation measures, as described in the IS/MND. The table below identifies only those APMs that have not been superseded and will be implemented as part of the Project.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Applicant Proposed Measures				
Aesthetics	APM AE-1: All Orchard Substation Facilities sites would be maintained in a clean and orderly state. Construction staging areas would be sited away from public view where possible. Nighttime lighting would be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, project staging and temporary work areas would be returned to pre-project conditions, including re-grading of the site and re-vegetation or re-paving of disturbed areas to match pre-existing contours and conditions.	Applicant or designated contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During all phases of the project.
Aesthetics	APM AE-2: Structures and equipment at the proposed Orchard Substation would be a non-reflective finish and neutral gray color.	Applicant or designated contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance.	During all phases of the project.
Agricultural Resources	APM AGR-1: Prior to commencing construction of the Orchard Substation Facilities, LSPGC must ensure that the Williamson Act contract for the 20-acre portion of the Project site impacted by the Project is: <ul style="list-style-type: none"> • Cancelled pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 5 of the California Government Code; • Determined by Fresno County to be consistent with the Proposed Project; or Nullified via eminent domain or purchase in lieu of eminent domain pursuant to Title 5, Division 1, Part 1, Chapter 7, Article 6 of the California Government Code.	Applicant to implement measure as described	LSPGC to provide evidence of compliance. CPUC mitigation monitor to inspect compliance.	Prior to construction.
Air Quality	APM AQ-1: The Orchard Substation Facilities portion of the Project would ensure that at least 32 percent of all diesel-powered equipment use (tracked as horse-power hours) during construction year 2022 is from equipment that meet USEPA-certified Tier 4 standards, the highest USEPA-certified tiered emission standards. Prior to the commencement of construction, LSPGC shall develop a diesel-powered equipment use hours tracking tool and procedure. The tracking tool shall be utilized by the Project to keep track of the certified engine tier and daily equipment use hours of all off-road diesel-powered equipment. If all diesel-powered equipment is certified Tier 4, the tracking tool would not be required; however, the Orchard Substation Facilities portion of the Project would be required to verify, record, and track the engine tier of all equipment. The tracking tool shall be maintained by the Project and tracking updates shall be submitted to the CPUC on a monthly basis to track the Project's compliance. Records of the engine tier of all equipment shall be kept onsite and made available to the CPUC upon request.	Applicant or designated contractors to implement measure as defined.	Applicant to maintain equipment list and provide upon request to CPUC along with tracking tool, as applicable. CPUC to mitigation monitor to inspect compliance.	Prior to and during all phases of construction activities at the Orchard Substation.
Air Quality	APM AQ-2: The Orchard Substation Facilities portion of the Project would comply with SJVAPCD Rule 8021 and would prepare and implement a Dust Control Plan for approval by the SJVAPCD Air Pollution Control Officer (APCO). The Dust Control Plan would include	Applicant or designated contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance.	Dust control plan to be prepared prior to, and

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	specific dust control measures as prescribed within Rule 8021, or as otherwise requested by the APCO. This plan would be submitted and approved prior to construction.			implemented during construction.
Air Quality	APM AQ-3: The Orchard Substation portion of the Project would comply with AB 203 and provide Valley fever awareness training to all construction workers, inspectors, monitors, and any other project personnel that are required to perform work in or near disturbed soils or dust emissions at the Orchard Substation Facilities site. The Valley fever awareness training materials would be prepared by a qualified professional, adapted from agency published trainings (CDPH, CDC, etc.), or otherwise produced by a qualified source. The Valley fever awareness training would be incorporated into the Project's overall Worker Environmental Awareness Program (WEAP) training.	Applicant or designated contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction.
Biological Resources	APM BIO-1: Speed of vehicles driving along proposed access roads and on the Project site during construction and O&M would be limited to 15 mph. In addition, construction and maintenance employees would be advised that care should be exercised when commuting to and from the Proposed Project area to reduce accidents and animal road mortality.	Applicant and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance	During all phases of the project.
Biological Resources	APM BIO-2 Conductors and ground wires would be spaced sufficiently apart so that raptors cannot contact two conductors or one conductor and a ground wire causing electrocution (APLIC 2006), or raptor protection would be installed subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines.	Applicant and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance	During all phases of the project.
Biological Resources	APM BIO-3: Appropriate methods to reduce the risks of avian collisions would be incorporated into the Project's design (APLIC 2012), subject to PG&E consent for application of such measures to its components of the Project, such as distribution lines	Applicant and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance	Prior to construction.
Biological Resources	APM BIO-4: If feasible, the Applicant would avoid construction during the migratory bird nesting or breeding season. When it is not feasible to avoid construction during the nesting or breeding season, the Applicant would perform a survey in the area where the work is to occur. This survey would be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified, a suitable construction buffer would be implemented to ensure that the nesting or breeding activities are not substantially adversely affected. If the nesting or breeding activities are being conducted by a federal- or state-listed species, the Applicant would consult with the USFWS and CDFW as necessary. Monitoring of the nest would continue until the birds have fledged or construction is no longer occurring on the site. If an inactive nest is identified, careful nest removal under the supervision and direction of qualified biologists would occur wherever feasible.	Applicant and its contractors to implement measure as defined.	Applicant's qualified biologist to coordinate with wildlife agencies (as applicable) regarding construction buffer. CPUC mitigation monitor to inspect compliance	Up to 30 days prior to construction and during all phases of construction activities.
Biological Resources	APM BIO-5: If a raptor nest is observed during pre-construction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure that nesting or breeding activities are not substantially adversely affected. If the biological monitor determines that activities associated with the	Applicant and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Up to 30 days prior to construction and during all phases of construction activities.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	Project are disturbing or disrupting nesting or breeding activities, the monitor would make recommendations to reduce noise or disturbance in the vicinity of the nest.			
Biological Resources	APM BIO-6: All excavated holes or trenches that are not be filled at the end of a workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife species.	Applicant and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance.	During all phases of the project.
Biological Resources	APM BIO-7: The use of outdoor lighting during construction and O&M of the Orchard Substation would be minimized whenever practicable.	Applicant and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance	During all phases of the project.
Biological Resources	APM BIO-8: A WEAP would be implemented to educate all construction and O&M workers on site-specific biological and non-biological resources and proper work practices to avoid harming wildlife during construction or O&M activities.	Applicant and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance	Immediately prior to construction. To be repeated for all new personnel.
Cultural and Tribal Cultural Resources	<p>APM CUL-1 (Development and Implementation of a Worker Environmental Awareness Program): LSPGC would design and implement a Worker Environmental Awareness Program (WEAP) that would be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. The WEAP would be submitted and approved by the CPUC prior to construction. No construction worker would be involved in ground disturbing activities without having participated in the WEAP. The WEAP would include, at a minimum:</p> <ul style="list-style-type: none"> • Training on how to identify potential cultural resources and human remains during the construction process; • A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation; • A discussion of procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Proposed Project; • A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and LSPGC policies; and • A statement by the construction company or applicable employer agreeing to abide by the WEAP, LSPGC policies and other applicable laws and regulations. <p>The WEAP may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist.</p>	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	Immediately prior to construction. To be repeated for all new personnel.
Cultural and Tribal Cultural Resources	APM CUL-2 (Cultural Resources Inventory): If proposed facilities and ground-disturbing activities move outside the previously surveyed footprint, those areas would be subjected to a cultural resources inventory to ensure that any newly identified cultural resources are avoided by ground disturbing activities.	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During construction

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
<i>Cultural and Tribal Cultural Resources</i>	APM CUL-3 (Archaeological and Native American Monitoring): If subsurface prehistoric or ethnohistoric resources are encountered during construction, archaeological and Native American monitoring is recommended during all excavation associated with the Project. A qualified archaeologist and a member of the Dumna Wo-Wah Tribal Government shall be retained by LSPGC to monitor excavation associated with the Proposed Project to ensure that there is no impact to any significant unanticipated cultural resource. Prior to construction, LSPGC would consult with a designated representative of the Dumna Wo-Wah Tribal Government on the appropriate course of action to be taken should unanticipated cultural materials, and specifically human remains, be discovered during construction.	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During construction of the project.
<i>Cultural and Tribal Cultural Resources</i>	APM CUL-4 (Unanticipated Discovery of Potentially Significant Prehistoric and Historic Resources): In the event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 100 feet (30 meters) of the discovery would be halted and redirected to another location. LSPGC's qualified archaeologist would inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts would occur, the resource would be documented on State of California Department of Parks and Recreation cultural resource records and no further effort would be required. If the resource cannot be avoided and may be subject to further impact, LSPGC would evaluate the significance and CRHR eligibility of the resources and, in consultation with the CPUC, determine appropriate treatment measures. Preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, LSPGC's qualified archaeologist, in consultation with the CPUC and, if the unearthed resource is prehistoric or Native American in nature, the Native American monitor, shall develop additional treatment measures, such as data recovery consistent with CEQA Guidelines Sections 15126.4(b)(3)(C)-(D). Archaeological materials recovered during any investigation shall be curated at an accredited curation facility.	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During all phases of the project.
<i>Cultural and Tribal Cultural Resources</i>	APM CUL-5 (Unanticipated Discovery of Human Remains): Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy where feasible and otherwise managed pursuant to the standards of CEQA Guidelines Sections 15064.5(d) and (e). If human remains are discovered during construction or O&M activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner would contact the NAHC. The NAHC would then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects. No part of the Project is located on federal land.	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During construction and project O&M

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Geology and Soils	<p>APM GEO-1: The following measures would be implemented during construction to minimize impacts from geological hazards and disturbance to soils:</p> <ul style="list-style-type: none"> • Keep vehicle and construction equipment within the limits of the Project and in approved construction work areas to reduce disturbance to topsoil; • Prior to grading, salvage topsoil to a depth of six inches or to actual depth if shallower (as identified in site-specific geotechnical investigation report) to avoid mixing of soil horizons; • Avoid construction in areas with saturated soils, whenever practical, to reduce impacts to soil structure and allow safe access. Similarly, avoid topsoil salvage in saturated soils to maintain soil structure; • Keep topsoil material on-site in the immediate vicinity of the temporary disturbance or at a nearby approved work area to be used in restoration of temporary disturbed areas. Temporary disturbance areas would be re-contoured following construction to match pre-construction grades. Areas would be allowed to re-vegetate naturally or would be reseeded with a native seed mix from a local source if necessary. On-site material storage would be sited and managed in accordance with all required permits and approvals; and <p>Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Removed vegetation would be disposed of off-site to an appropriate licensed facility or can be chipped on-site to be used as mulch during restoration.</p>	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During construction.
Geology and Soils	<p>APM GEO-2: The structural requirements of the CBC are applicable to certain structural components of the Project, including the control enclosures. LSPGC and/or its contractors would design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Supplemental Geotechnical Engineering Report to be prepared and submitted to the CPUC upon completion.</p>	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	Submit supplemental geotechnical report to CPUC prior to construction and adhere to its requirements during construction.
Paleontology	<p>APM PALEO-1: In the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), earthwork within the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered and the qualified paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.</p>	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During Construction.
Paleontology	<p>APM PALEO-2: Recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository (e.g., the SDNHM, the University of California Museum of Paleontology) along with associated field notes, photographs, and compiled fossil locality data.</p>	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During construction.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	Donation of the fossils should be accompanied by financial support for initial specimen curation and storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.			
GHG	<p>APM GHG-1: The following measures shall be implemented to minimize greenhouse gas emissions from all construction sites:</p> <ul style="list-style-type: none"> • If suitable park-and-ride facilities are available in the Project vicinity, construction workers shall be encouraged to carpool to the job site. • Demolition debris shall be recycled for reuse to the extent feasible. • The contractor shall use line power instead of diesel generators at all construction sites where line power is available. <p>The contractor shall maintain construction equipment per manufacturing specifications.</p>	Applicant and its contractors to implement measure as described.	CPUC mitigation monitor to inspect compliance	During construction.
Hazardous Materials	<p>APM HAZ-1: A site-specific Spill Prevention, Control, and Countermeasure Plan (SPCCP) would be prepared prior to the initiation of construction. In the event of an accidental spill, the Project would be equipped with secondary containment that meets SPCCP Guidelines. The secondary containment would be sufficiently sized to accommodate accidental spills.</p>	Applicant or designated contractors to implement measure as defined.	Applicant and/or its contractor to track compliance. CPUC mitigation monitor to inspect compliance	SPCCP to be prepared prior to construction and implemented during all phases of the project.
Hazardous Materials	<p>APM HAZ-2: A Hazardous Materials Management Plan (HMMP) would be prepared and implemented for the Project. The plan would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., Cal/OSHA). The plan would include the following information related to hazardous materials and waste, as applicable:</p> <ul style="list-style-type: none"> • A list of hazardous materials present on-site during construction and O&M to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements; • A Hazardous Materials Communication (i.e., HAZCOM) Plan; • Assignments and responsibilities of Project health and safety roles; • Standards for any secondary containment and countermeasures required for hazardous materials; • Spill response procedures based on product and quantity. The procedures would include materials to be used, location of such materials within the Project area, and disposal protocols; and • Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA trained individual and testing at a certified laboratory. 	Applicant or designated contractors to implement measure as defined	Applicant and/or its contractor to track compliance. CPUC mitigation monitor to inspect compliance	HMMP to be prepared prior to construction and implemented during all phases of the project.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	<p>The Project would also be equipped with lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Secondary containment would be constructed around and under the battery racks, and the HMMP would address containment from a battery leak.</p> <p>The plan would be provided to the CPUC prior to construction for recordkeeping. Plan updates would be made and submitted as needed if construction activities change whereas the existing plan does not adequately address the Project.</p>			
Hazardous Materials	<p>APM HAZ-3: In the event that soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading activities or excavation activities, the excavated soil shall be tested, and if contaminated above hazardous waste levels, shall be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil shall require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.</p>	Applicant or designated contractors to implement measure as defined	Applicant and its contractor to track compliance. CPUC mitigation monitor to inspect compliance	During construction
Hazardous Materials	<p>APM HAZ-4: LSPGC shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. Although the Project area is not located within an area designated as a Very High or High Fire Hazard Severity Zone, LSPGC will prepare a Construction Fire Prevention Plan prior to construction.</p> <p>All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect.</p> <p>Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from</p>	Applicant or designated contractors to implement measure as defined	Applicant and its contractor to track compliance. CPUC mitigation monitor to inspect compliance	During construction

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	dry vegetation. Water tanks, fire extinguishers, and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.			
Water Quality	<p>APM WQ-1: Because the Project involves more than an acre of soil disturbance, a SWPPP would be prepared as required by the state NPDES General Permit for Discharges of Stormwater Associated with Construction Activity. This plan would be prepared in accordance with the Water Board guidelines and other applicable erosion and sediment control BMPs. Implementation of the plan would help stabilize disturbed areas and would reduce erosion and sedimentation. The SWPPP would designate BMPs that would be followed during and after construction of the Project, examples of which may include the following erosion-minimizing measures:</p> <ul style="list-style-type: none"> • Using drainage control structures (e.g., straw wattles or silt fencing) to direct surface runoff away from disturbed areas; • Strictly controlling vehicular traffic; • Implementing a dust-control program during construction; • Restricting access to sensitive areas; • Using vehicle mats in wet areas; or • Revegetating disturbed areas, where applicable, following construction. <p>In areas where soils are to be temporarily stockpiled, soils would be placed in a controlled area and would be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles would be placed at least 100 feet from the waterbody or would be properly contained (such as beaming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures would be used to protect exposed areas during and after construction activities. Erosion-control measures would be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures, such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.</p>	Applicant and its contractors to implement measure as described.	Applicant and its contractors to track compliance. CPUC mitigation monitor to inspect compliance.	SWPPP to be prepared prior to construction and implemented during construction.
Water Quality	<p>APM WQ-2: Groundwater encountered during construction would be handled and discharged in accordance with all state and federal regulations including the following: Recovered groundwater would be contained on site and tested prior to discharge; If testing determines water is suitable for land application, discharge may be applied to flat, vegetated, upland areas, used for dust control, or used in other suitable construction operations (e.g., concrete mixing);</p>	Applicant and its contractors to implement measure as described.	Applicant and its contractors to track compliance. CPUC mitigation monitor to inspect compliance	During construction

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	<p>Land application would be made in a manner that discharge does not result in substantial erosion and would not be made directly to receiving waters or storm drains; Water unsuitable for land application would be disposed of at an appropriately permitted facility; and Discharge to surface waters or storm drains may occur only if permitted by the agency(ies) with jurisdiction over the resource (e.g., USACE [U.S. Army Corps of Engineers], RWQCB, and/or CDFW [California Department of Fish and Wildlife], as applicable).</p>			
Public Services	<p>APM PS-1: LSPGC would coordinate construction activities with local law enforcement and fire protection agencies. Emergency service providers would be notified of the timing, location, and duration of construction activities.</p>	<p>Applicant or designated contractors to implement measure as defined</p>	<p>Applicant and its contractors to track compliance. CPUC mitigation monitor to inspect compliance</p>	<p>During construction</p>
Traffic and Transportation	<p>APM TRA-1: LSPGC would prepare a Traffic Control Plan to describe measures to be taken to guide traffic (such as signs and workers directing traffic), safeguard construction workers, provide safe passage, and minimize traffic impacts. LSPGC would follow its standard safety practices as needed, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. LSPGC would follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. If required for obtaining a local encroachment permit, LSPGC would establish a Traffic Management Plan (TMP) to address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Construction activities would be coordinated with local law enforcement and fire protection agencies. Emergency service providers would be notified as required by the local permit of the timing, location, and duration of construction activities.</p>	<p>Applicant or designated contractors to implement measure as defined</p>	<p>Applicant and its contractors to track compliance. CPUC mitigation monitor to inspect compliance</p>	<p>Prepare Traffic Control Plan prior to construction and implement plan during construction</p>
Public Utilities	<p>APM UTIL-1: The Applicant shall notify all utility companies with utilities located within or crossing the Orchard Substation Facilities' Rights-of-Way (ROW) to locate and mark existing underground utilities along the entire length of the Orchard Substation Facilities at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-part utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.</p>	<p>Applicant or designated contractors to implement measure as defined</p>	<p>CPUC mitigation monitor to inspect compliance</p>	<p>At minimum, 30-days prior to construction.</p>

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PG&E Construction Measures				
Biological Resources	AMM-1: Train employees and contractors in environmental regulations and guidelines to avoid or reduce effects on covered species.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	Prior to construction to be repeated for new personnel.
Biological Resources	AMM-2: Park vehicles and equipment on pavement, roads, or previously disturbed areas.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Biological Resources	AMM-3: Minimize or avoid new disturbance to the extent practicable.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Biological Resources	AMM-4: Do not exceed a speed limit of 15 mph on ROWs or unpaved roads within sensitive land cover types.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During all phases of the project.
Biological Resources	AMM-5: Do not dump trash, bring firearms or pets, or have open fires such as barbecues on worksites.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During all phases of the project.
Biological Resources	AMM-6: Do not refuel vehicles within 100 ft of a wetland or waterway unless a bermed and lined refueling area is constructed.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During all phases of the project.
Biological Resources	AMM-7: In areas of high risk of wildlife electrocution, use insulated jumper wires, animal guards for equipment insulator bushings, or construct lines to follow the Bird and Wildlife Protection Standards.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During all phases of the project.
Biological Resources and Wildfire	AMM-8: During fire season in SRAs, carry backpack water sprayers and shovels in all vehicles; during red flag conditions curtail welding, carry a large fire extinguisher on each fuel truck, and clear parking and storage areas of flammable materials.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Biological Resources and Water Quality	AMM-9: Implement erosion control measures where necessary to reduce erosion and sedimentation in wetlands or waterways.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Biological Resources	AMM-10: If more than 0.25 acre of grassland is disturbed, except in areas with vernal pools or covered plant species, restore to pre-existing conditions using a certified weed-free commercial seed mix.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.

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Biological Resources	AMM-11: If elderberry plants with one or more stems 1 inch at ground level are present, establish an exclusion zone of 20 ft. If impacts are unavoidable, follow additional measures in the VELB conservation plan and compliance brochure, which must be in all vehicles working within range of VELB.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Biological Resources	AMM- 12: San Joaquin kit fox. If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided where possible. However, if dens are located within the proposed work area and cannot be avoided during construction, qualified biologists will determine if the dens are occupied. If unoccupied, the qualified biologist will remove these dens by hand excavating them in accordance with USFWS procedures (U.S. Fish and Wildlife Service 1999). Exclusion zones will be implemented following USFWS procedures (U.S. Fish and Wildlife Service 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be as follows: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and DFG. Pipes will be capped and exit ramps will also be installed in these areas to avoid direct mortality.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Biological Resources	BMP-1: Nesting Birds. If work is anticipated to occur within the nesting bird season (February–September), nesting birds, including raptors and other species protected under the Migratory Bird Treaty Act, may be impacted. If active nests are discovered, exclusionary measures and or designated avoidance buffers may be required and implemented according to the guidance in the PG&E Nesting Bird Management Plan. For nests discovered during construction, PG&E implements Work Procedure (WP) 2321 to identify and avoid impacts to nesting birds. WP 2321 generally requires assistance from the project biologist to determine if the construction action will impact the nest, and if so, identify whether alternative actions or monitoring can be implemented to avoid impacts. If active nests are observed during construction, crews must immediately alert the PG&E project biologist.	PG&E and its designated contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Geology and Soils	BMP-2: Generation of Spoil - Substation. All spoils generated from within PG&E substations require sampling and shall only be disposed of PG&E approved landfills listed in ERTC Attachment Guide, Section 4, Part 1: ENV-4000P-01-JA15 'Job Aid- PG&E Authorized Disposal & Recycling Facilities'. Spoils from within substations are prohibited from give-away. Copies of all manifests are required to be submitted to the Environmental Lead/Project Environmental Field Specialist (EFS).	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Geology and Soils	BMP-3: Addendum to the Geotechnical Investigation Report. Prior to final design and construction of the PG&E Interconnection Facilities, PG&E would prepare an addendum to the Geotechnical Investigation Report prepared by Kleinfelder, 2015. The addendum would acknowledge and describe Segments GV13 and GV14 of the Great Valley Fault System, and verify that the project design is sufficient to withstand movement and the associated shaking that could occur on the two fault segments.	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	Prior to construction.

**TABLE 5-1
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Hazardous Materials	<p>BMP-4: Asbestos. If any loadbearing structure (poles, towers, concrete pads, etc.) is to be removed, this Project will require asbestos testing and notification to the local Air District or California Air Resource Board (CARB). Notify the Environmental Field Specialist (EFS) at least 45 calendar days prior to work commencing. The Air District must be notified at least 10 working days prior to work (demolition) commencing, some districts require 14 days. If the construction start date changes, notify the EFS immediately as notification to the Air District may need to be resubmitted. EFS is responsible for obtaining any necessary permits from the air district prior to start of work.</p>	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	Notification to occur prior to construction, as described in measure.
Hazardous Materials	<p>BMP-5: Combustion Sources. If project or work involves the installation of a combustion source that may require a local air district permit, please work with the EFS and Air SME to evaluate compliance requirements. Combustion sources, depending on HP or MMBtu rating may require an Authority to Construct Permit prior to any installation activities and a Permit to Operate prior to operating.</p> <p>Typical Combustion Sources that require permits are:</p> <ul style="list-style-type: none"> • Engines ≤50 HP; • Boilers/Heaters that combust natural gas; and • Flares 	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	Prior to and during construction.
Air Quality	<p>BMP-6: Fugitive Dust General. Types work activities where water trucks or other dust abatement methods are typically required include: excavation, trenching, grading, sand blasting, and demolition. The crew shall not allow visible dust to pass beyond the project boundary. The crew shall abate dust by:</p> <ul style="list-style-type: none"> • Applying water to disturbed areas and to storage stockpiles; • Applying water in sufficient quantities to prevent dust plumes during activities such as clearing & grubbing, backfilling, trenching and other earth moving activities; • Limit vehicle speed to 15 miles per hour; • Load haul trucks with a freeboard (space between top of truck and load) of six inches or greater; • Cover the top of the haul truck load; • Clean-up track-out at least daily; and • The crew shall not generate dust in amounts that create a nuisance to wildlife or people, particularly where sensitive receptors such as schools and hospitals are located nearby or down-wind. <p>During inactive periods (e.g. after normal working hours, weekends, and holidays), the crew shall apply water or other approved material to form a visible crust on the soil and restrict vehicle access</p>	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.

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<i>Air Quality</i>	BMP-7: San Joaquin Valley AQMD >1 acre of soil disturbing activities. A Construction Notification Form must be submitted to the San Joaquin Valley APCD by the Environmental Lead/Project EFS at least 48 hours prior to commencing any earth moving activities.	PG&E to implement measures.	PG&E to track and maintain its own compliance.	At least 48 hours prior to construction earth moving activities.
<i>Hazardous Materials</i>	BMP-8: Hazardous Materials Business Plan: The Environmental Field Specialist (EFS) shall be notified 30 days prior to a threshold exceeding hazardous material/waste being placed on-site. Threshold limits are: 200 cubic feet of compressed gases (1000 cubic feet for simple asphyxiation or the release of pressure only; carbon dioxide), 500 pounds of solids, or 55 gallons of liquids for more than 30 non-consecutive days. The following jurisdictions require notification for any amount of hazardous material/waste: Counties: Nevada, San Bernardino (waste only), San Francisco, Santa Clara (call for city specific details), Santa Cruz, Yuba (waste only) Cities: Bakersfield (waste only), Berkeley, Healdsburg, Sebastopol, Petaluma, Santa Clara (call for city specific details). NOTE: The Project EFS will develop an HMBP if it is required.	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	Prior to or during construction; 30 days prior to a threshold exceeding event, as applicable.
<i>Hazardous Materials</i>	BMP-9: Hazardous Waste Management Hazardous Materials Storage: This project may involve the storage of hazardous materials and they must be managed according to regulations and best management practices. <ul style="list-style-type: none"> • All releases of hazardous materials must be immediately addressed. Maintain a spill kit onsite during the length of the project. Contact the project EFS for spills of hazardous materials/wastes to determine if agency notifications will be required and/or if additional resources are needed. • Hazardous materials, greater than 440 lbs and less than 1001 lbs can be transported on PG&E vehicles if the proper MOT shipping paper/MSDS accompanies the load. Contact the project EFS for additional guidance in these areas. • All hazardous materials containers must be marked correctly. • All hazardous materials signs must be displayed as required. • Non saturated oily rags (to be laundered) stored in non-combustible containers. • Emergency equipment such as fire extinguisher, eye wash, MSDS, etc. on-site. • Hazardous material containers must be in good condition. • All hazardous materials must be compatible with containers. • Hazardous materials containers are kept closed. If there is an unauthorized release of hazardous material, contact your Environmental Field Specialist immediately. For after-hours releases contact the Environmental Emergency Hotline at 1-800-874-4043.	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	During all phases of the project.
<i>Hazardous Materials</i>	BMP-10: Sulfur Hexafluoride (SF6) Gas Material/Waste Management. Before accessing any equipment that may contain SF6 gas byproduct waste, contact your local Environmental Field Specialist (EFS) at least two weeks in advance for assistance in arranging cleanup,	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	Prior to and/or during construction as described by measure.

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	<p>transportation and disposal. PSC will retrieve, package, label and transport SF6 byproducts. All SF6 waste that is removed from a Substation must have proper shipping papers which could include a remote waste shipping paper or a manifest (manifests require a temporary EPA ID number).</p> <ul style="list-style-type: none"> Substation personnel shall contact PSC to retrieve, package, label, and transport SF6 byproduct waste (i.e. fluorides of sulfur, metallic fluorides, etc.). All SF6 byproduct waste that is removed must have proper shipping papers, which could include a remote waste shipping paper or a manifest (manifests require a permanent or temporary EPA ID number). SF6 cylinder tracking and facility inventory shall be managed in accordance with Utility Procedure TD-3350P-001. <p>Advanced Specialty Gas (ASG) provides sole-source service in supplying, replacing, removal and recycling of SF6 in all facilities. ASG provides 24-hour service in response to events involving SF6 as well as delivery and removal of all SF6 cylinders. Contact information: https://www.advancedspecialtygases.com.</p>			
Hazardous Materials	<p>BMP-11: SPCC: The local/support EFS shall be notified 30 days prior to an SPCC triggering event occurs (modification to existing or new storage of >1,320 gallons of oil in containers >55 gallons). If the oil volume is contained in anything greater than 55 gallons, the SPCC Plan must be certified by an engineer. The SPCC containment must be installed prior to moving onsite of quantities requiring containment. The PM number must remain open until the local/support EFS notifies you that the plan is certified by an engineer, and any necessary modifications are complete.</p>	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	During all phases of the project.
Hazardous Materials	<p>BMP-12: Treated Wood: All new and used treated wood poles shall be managed in accordance with ENV-3000P-07 and stored on horizontal non-treated wood, concrete, or metal support beams raised off the ground to prevent decay and damage. As with any hazardous material, store treated wood away from storm drains.</p>	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	During all phases of the project.
Hazardous Materials	<p>BMP-13: Treated Wood Waste: All treated wood waste and debris (e.g., poles, cross-arms, saw dust, chips, etc.) shall be transported to the local PG&E or PG&E Contractor approved collection point and placed in designated bins. No poles may be left in place, unless formal authorization is obtained from applicable State and/or Federal agencies or a liability waiver is signed. Please refer to Job Aid ENV-4000P-07.</p>	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	During all phases of the project.
Hydrology and Water Quality	<p>BMP-14: Stormwater Measures: The Project EFS [Environmental Field Specialist] will provide the Stormwater Group with the following upon completion of the PER: Stormwater Needs Request Form, Soil Disturbance Calculation Spreadsheet, and a KMZ file showing the proposed work area. These documents shall be sent by the Project EFS, via email, to: stormwater@pge.com (if applicable).</p>	PG&E and its contractors to implement measure as defined.	PG&E to track and maintain its own compliance.	During construction.

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<i>Hydrology and Water Quality</i>	BMP-15: Stormwater Management A-ESCPs: Standard PG&E good housekeeping and stockpile management measures shall be implemented.	PG&E and its contractors to implement measure as defined.	PG&E to track and maintain its own compliance.	During all phases of the project.
<i>Hydrology and Water Quality</i>	BMP-16: Small Excavation: Construction Dewatering: Dewatering of trenches or excavations may be required. The Environmental Lead/Project EFS shall be notified at least 30 days in advance to ensure the appropriate dewatering methods are used, proper notifications are made, and, if necessary, applicable authorizations/permits are obtained. All dewatering activities must be coordinated through the Environmental Lead/Project EFS throughout the duration of the project.	PG&E to implement measures for PG&E Interconnection.	PG&E to track and maintain its own compliance.	Coordinate with EFS at least 30 days prior to dewatering, as applicable, prior to or during construction.
<i>Cultural and Tribal Cultural Resources</i>	<p>BMP-17: Inadvertent Cultural Resource Discovery. If cultural resources are observed during ground-disturbing activities, the following procedures will be followed:</p> <ul style="list-style-type: none"> • Stop all ground disturbing work within 100 feet of the discovery location to avoid impacts. • Immediately notify a PG&E Cultural Resource Specialist who will assess the discovery. • Leave the site or the artifact untouched. • Record the location of the resource, the circumstances that led to discovery, and the condition of the resource. • Do not publicly reveal the location of the resource and ensure the location is secured. • If unsure about the significance or antiquity of a discovery, photograph the artifact or feature with a scale (e.g., coin, tape measure, etc.) and send to a PG&E Cultural Resource Specialist for review. <p>Comprehensive guidance on the protocol related to an inadvertent discovery of potentially significant cultural resources on a job site can be found in Utility Standard ENV-8005S or by consulting a PG&E Cultural Resource Specialist.</p>	PG&E and its contractors to implement measure as defined.	PG&E to track and maintain its own compliance.	During construction.
<i>Cultural and Tribal Cultural Resources</i>	<p>BMP-18: Human Remains Protocol. Section 7050.5 of the California Health and Safety Code (CHSC) states that it is a misdemeanor to knowingly disturb a human burial. In keeping with the provisions provided in 7050.5 CHSC and Public Resource Code 5097.98, if human remains are encountered (or are suspected) during any project-related activity:</p> <ul style="list-style-type: none"> • Stop all work within 100 feet; • Immediately contact a PG&E Cultural Resource Specialist (CRS), who will notify the county coroner; • Secure location, but do not touch or remove remains and associated artifacts; • Do not remove associated spoils or pick through them; • Record the location and keep notes of all calls and events; and • Treat the find as confidential and do not publicly disclose the location. • Contact: 	PG&E and its contractors to implement measure as defined.	PG&E to track and maintain its own compliance.	During construction.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	<ul style="list-style-type: none"> Upon discovery of cultural resources or suspected human remains, contact the following individual immediately: CRS Name: [Contact to be provided prior to construction.] 			
Biological Resources	BMP-19: Bio Survey. A pre-activity survey (PAS) must be performed within 30 days of the construction start date to determine the presence of covered species. Results of the PAS will determine if any additional requirements, including monitoring and species specific AMMs, need to be implemented at these locations during construction. Any identified avoidance measures will be provided to construction crews. Avoidance measures must be adhered to during construction. Contact the PG&E project Biologist at least 30-days prior to start of any project activities, including mobilization and staging of equipment materials.	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	PAS to occur 30-days prior to construction start date; adhere to avoidance measures as described during construction.
Cultural and Tribal Cultural Resources	BMP-20: Worker Awareness Training. Prior to the start of any ground-disturbing activity, PG&E's Cultural Resource Specialist (CRS) shall prepare archeological, historical and paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The CRS shall make the training materials available for review and comment by the Native American group that expressed interest in the project. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the CRS. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of resources that could be encountered within the Project site and the procedures to be followed if they are found. PG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, which documentation shall be made available upon request.	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	Prior to and during construction. WEAP training to be repeated for new construction personnel.
Paleontological Resources	BMP-21: Inadvertent Paleontological Resource Discovery. In the event that a paleontological resource is discovered during ground-disturbing activities, the foreman will temporarily divert the construction equipment around the find until it is assessed for scientific significance. A buffer of at least 50 feet around the discovery will be maintained for safety. The foreman will report the discovery to the site Supervisor and the PG&E point of contact given on the training brochure so that appropriate notifications can be issued. A temporary construction exclusion zone, consisting of lath and flagging tape in a 50-foot radius, will be erected around the discovery. Following fossil collection, the temporary construction exclusion zone will be removed and, once a professional paleontologist has assessed the situation, he/she will notify the site supervisor that construction activities may resume in the area of the find.	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.
Paleontological Resources	BMP-22: Paleontological Resource Monitoring, Salvage, and Treatment Protocols. In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP-21) shall be followed; if significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology	PG&E and its contractors to implement measure as described.	PG&E to track and maintain its own compliance.	During construction.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	<p>[SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review before continuing construction activities in the area of the find or as otherwise directed by the qualified paleontologist. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.</p> <ul style="list-style-type: none"> • The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010). • The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion. <p>The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment.</p>			
CEQA MITIGATION MEASURES				
Biological Resources	<p>Mitigation Measure BIO-1: Protection of Kit Fox During Construction. Preconstruction surveys shall be conducted by a qualified biologist for the presence of San Joaquin kit fox within 14 days prior to commencement of construction activities pursuant to the USFWS (1999) <i>Standardized Recommendations for Protection of the San Joaquin Kit Fox</i>. The surveys shall be conducted in areas of suitable habitat for San Joaquin kit fox. Areas that have been disked or cultivated within 12 months prior to the start of ground-disturbing activities are not considered suitable. Surveys need not be conducted for all areas of suitable habitat at one</p>	Applicant and their contractors to implement measure as described for construction of the Orchard Substation Facilities.	Applicant to track compliance; CPUC mitigation monitor to inspect compliance for Orchard Substation Facilities.	Prior to and during construction as defined in mitigation measure.

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
	<p>time; they may be phased so that surveys occur within 14 days prior to disturbance within active portions of the site. If no potential San Joaquin kit fox dens are identified, no further mitigation is required. If potential kit fox dens are observed and avoidance is determined to be feasible (as defined in CEQA Guidelines §15364 consistent with the USFWS [1999] <i>Standardized Recommendations for Protection of the San Joaquin Kit Fox</i>) by a qualified biologist in consultation with the Project owner and the County, buffer distances shall be established prior to construction activities.</p> <p>If avoidance of the potential dens is not feasible, the following measures shall be implemented to avoid potential adverse effects to the San Joaquin kit fox:</p> <p>If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent foxes from using them during construction.</p> <p>If the qualified biologist determines that a potential non-natal kit fox den may be active, an on-site passive relocation program shall be implemented with prior approval from the USFWS. This program shall consist of excluding San Joaquin kit foxes from occupied burrows by installation of one-way doors at burrow entrances, monitoring of the burrow for 72 hours to confirm usage has been discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the qualified biologist determines that the San Joaquin kit foxes have stopped using active dens within the Project boundary, the dens shall be hand-excavated, as stated above for inactive dens.</p>			
Geology, Soils, and Seismicity	<p>Mitigation Measure GEO-1: Fault Study. In order to account for any effects related to strong seismic ground shaking due to the presence of the Great Valley thrust fault system, the required supplemental geotechnical report for the Orchard Substation Facilities shall account for the presence of the Great Valley thrust fault system. The report shall be prepared by a qualified geotechnical engineer licensed by the State of California. The report shall include an analysis of the presence of the Great Valley thrust fault system and how its proximity to the Project would inform the seismic design of the Project components.</p>	<p>The Applicant and/or their designated contractors to implement measures as described.</p>	<p>CPUC mitigation monitor to inspect compliance</p>	<p>Prior to construction.</p>
Paleontological Resources	<p>Mitigation Measure GEO-2: Worker Awareness Training and Monitoring Protocols. Prior to the start of any ground-disturbing activity, the project owner shall retain a qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) to prepare paleontological resources sensitivity training materials for use during a Project-wide Worker Environmental Awareness Training (WEAP), or equivalent. The WEAP shall be conducted by a qualified environmental trainer working under the supervision of the qualified paleontologist. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found. The project owner and/or their contractors shall retain Documentation demonstrating that all construction personnel attended the training prior to the start of work on the site and shall provide the documentation to the CPUC Project Manager upon request.</p>	<p>The Applicant and their designated contractors to implement measures as described.</p>	<p>CPUC mitigation monitor to inspect compliance for Orchard Substation Facilities.</p>	<p>Prior to soil disturbing construction activities.</p>

**TABLE 5-1
TABLE OF MITIGATION MEASURES**

Resource Area	Applicant Proposed Measures (APMs) PG&E Avoidance and Impact Minimization Measures (AMMs), Best Management Practices (BMPs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Paleontological Resources	<p>Mitigation Measure GEO-3: Paleontological Resource Monitoring, Salvage, and Treatment Protocols. In the event of a discovery during ground disturbance, the procedures described in APM PALEO-1 (and BMP-21) shall be followed; if significant paleontological resources are encountered, the qualified paleontologist (meeting the standards set by the Society of Vertebrate Paleontology [SVP]) may recommend paleontological resource monitoring. In the event that monitoring is deemed necessary, the qualified paleontologist shall prepare and the project owner and/or their contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), the details of which would be decided based on the significance of the discovery. The plan shall be submitted to the CPUC Project Manager for review and approval before continuing construction activities in the area of the find. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.</p> <ul style="list-style-type: none"> • The qualified paleontologist shall identify, and the project owner and/or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010). • The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct paleontological resources monitoring at a frequency and level to be decided based on the significance of the discovery. The PRMMP shall clearly set the parameters of the monitoring. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. The project owner shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion. • The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. This would be in line with APM PALEO-2, which gives specific details for fossil treatment. 	The Applicant and their designated contractors to implement measures as described for the construction of the Orchard Substation Facilities.	CPUC mitigation monitor to inspect compliance for the Orchard Substation Facilities	During Construction.

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APPENDIX A

Mailing List

**TABLE 1
MASTER MAILING LIST:
AGENCIES, ORGANIZATIONS AND INDIVIDUAL
SENT A HARD COPY OF DRAFT IS/MND VIA OVERNIGHT DELIVERY SERVICE**

AGENCY/ORGANIZATION	NAME	JOB TITLE	STREET ADDRESS	CITY	STATE	ZIP
Lead Agency						
California Public Utilities Commission	Boris Sanchez	Public Utilities Regulatory Analyst III	505 Van Ness Avenue	San Francisco	CA	94102
Applicant						
LS Power Grid California	Mark Milburn					
Libraries						
Coalinga-Huron Library District	Attn. Mary Leal	Library Director	305 N. 4 th Street	Coalinga	CA	93210
Huron Public Library	Attn. Malba McHaney	Librarian	36050 O Street	Huron	CA	93234
Fresno County Main Library	Attn. Mary Yamanaka	(Government document)	2420 Mariposa Street	Fresno	CA	93721

**TABLE 2
MASTER MAILING LIST:
AGENCIES, ORGANIZATIONS, AND INDIVIDUALS SENT A NOTICE OF INTENT VIA UNITED STATES POSTAL SERVICE**

AGENCY/ORGANIZATION/INDIVIDUAL	FIRST NAME	LAST NAME	JOB TITLE	STREET ADDRESS	CITY	STATE	ZIP
Agencies							
County of Fresno	Paul	Dictos	Assessor-Recorder	2281 Tulare Street	Fresno	CA	93721
Coalinga City Council	Ron	Ramsey	Council Mayor Pro-Tem	155 West Durian Avenue	Coalinga	CA	93210
City of Coalinga	Shannon	Jensen	City Clerk	155 West Durian Avenue	Coalinga	CA	93210
Fresno County Public Works and Planning Department	Steven	White	Director	2220 Tulare Street, 6 th Floor	Fresno	CA	93721
City of Coalinga	John	Self	Building Official, Community Development	155 West Durian Avenue	Coalinga	CA	93210
City of Coalinga	Sean	Brewer	Asst. City Manager, Community Development/Development Review	155 West Durian Avenue	Coalinga	CA	93210
County of Fresno	William	Kettler	Division Manager, Public Works and Planning, Development Services and Capital Projects	2220 Tulare Street, 6 th Floor	Fresno	CA	93721
City of Coalinga, Tri City Engineering				4630 W. Jennifer Avenue, Suite 101	Fresno	CA	93722
Westlands Water District	Thomas	Birmingham	General Manager	3130 N. Fresno Street	Fresno	CA	93703-6056
Westlands Water District	Daniel	Errotabere	President, Board of Directors	3130 N. Fresno Street	Fresno	CA	93703-6056
San Joaquin Valley Air Pollution Control District				1990 E. Gettysburg Avenue	Fresno	CA	93726
Central Valley Water Quality Control Board				1685 E Street	Fresno	CA	93706
State Water Resources Control Board				1001 I Street	Sacramento	CA	95814
California Dept. of Transportation (DIST. 6)				1352 W Olive Avenue	Fresno	CA	93728
California Energy Commission	Drew	Bohan	Executive Director	1516 9 th Street	Sacramento	CA	95814

TABLE 2 (CONTINUED)
MASTER MAILING LIST:
AGENCIES, ORGANIZATIONS, AND INDIVIDUALS SENT A NOTICE OF INTENT VIA UNITED STATES POSTAL SERVICE

AGENCY/ORGANIZATION/INDIVIDUAL	FIRST NAME	LAST NAME	JOB TITLE	ADDRESS	CITY	STATE	ZIP
Individuals							
Landowner	Joe	Coelho Jr.	Trustee and John A. Coelho, Trustee	5494 W MT WHITNEY AVE	RIVERDALE	CA	93656
Landowner	Christopher R.	Woolf,	Trustee & Anne A. Delaware, Trustee	7041 N VAN NESS	FRESNO	CA	93711
Landowner			California Land Company	7041 N VAN NESS	FRESNO	CA	93711
Landowner	Michael	Dresick		P O BOX 1260	HURON	CA	93234
Landowner			Saje Farming Company	P O BOX 1260	HURON	CA	93234