

Initial Study/Mitigated Negative Declaration

LS Power Grid California Manning 500/230 Kilovolt Substation Project

Prepared for:



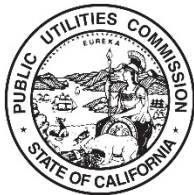
California Public Utilities Commission

March 2025

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LS Power Grid California Manning 500/230 Kilovolt Substation Project

Prepared for:



California Public Utilities Commission

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March 2025

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LIST OF ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AAQS	ambient air quality standard
AB	Assembly Bill
AC	alternating current
ACC II	Advanced Clean Cars II
ACC	Advanced Clean Cars
AF	acre-feet
AFY	acre-feet per year
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AMM	avoidance and minimization measure
ANSI	American National Standards Institute
APCO	Air Pollution Control Officer
APM	applicant-proposed measure
AQMP	air quality management plan
ASTM	American Society for Testing and Materials
ATP	Active Transportation Plan
BLM	Bureau of Land Management
BMP	best management practice
BP	before present
BPS	best performance standard
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	climate action plan
CARB	California Air Resources Board
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCEMS	Central California Emergency Medical Services
CCR	California Code of Regulations
CCR	California Code of Regulations

CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFPP	construction fire prevention plan
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	methane
CHP	California Highway Patrol
CI	carbon intensity
CIWMA	California Integrated Waste Management Act
CM	construction measure
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CPCN	certificate of public convenience and necessity
CPUC	California Public Utilities Commission
CREC	controlled recognized environmental condition
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CRS	cultural resources specialist
CUPA	Certified Unified Program Agency
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CVP	Central Valley Project
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibel
dBA	A-weighted" decibel
diesel PM	diesel particulate matter
DOC	California Department of Conservation
DOF	California Department of Finance
DOT	U.S. Department of Transportation
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
ECA	Essential Connectivity Area
EDD	Employment Development Department
EPA	US Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act

ESA	environmentally sensitive area
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	floor area ratio
FCFPD	Fresno County Fire Protection District
FCOG	Fresno Council of Governments
FCSO	Fresno County Sheriff's Office
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	flood insurance rate map
FMMP	Farmland Mapping and Monitoring Program
FPMP	Fugitive PM10 Management Plan
GAMAQI	Guidance for Assessing and Mitigating Air Quality
GHG	greenhouse gas
GIE	gas-insulated equipment
GO	general order
GSA	groundwater sustainability agency
GSP	groundwater sustainability plan
HAP	hazardous air pollutant
HFHSZ	High Fire Hazard Severity Zone
HFTD	High Fire Threat District
high-GWP	high global warming potential
HMBP	hazardous materials business plan
HMMP	hazardous materials management plan
hp	horsepower
HRA	health risk assessment
HREC	historical recognized environmental condition
HSC	California Health and Safety Code
HVAC	heating ventilation and air conditioning
Hz	hertz
I	Interstate
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IS/MND	initial study/mitigated negative declaration
ITP	Incidental Take Permit
K	soil-erodibility factor
KOP	key observation point
kV	kilovolt
kWh	kilowatt-hours

lb/day	pounds per day
LCFS	Low Carbon Fuel Standard
LCI	Governor's Office of Land Use and Climate Innovation
LDIGR	Local Development Intergovernmental Review
L_{eq}	average equivalent sound level
LOP	limited operation period
LOS	level of service
LRA	Local Responsibility Area
LSPGC	LS Power Grid California, LLC
LST	lattice steel tower
M&I	municipal and industrial
MBTA	Migratory Bird Treaty Act
MLD	most likely descendants
MMTCO _{2e}	metric tons of carbon dioxide equivalent emissions
mPa	micro-Pascal
mph	miles per hour
MPO	metropolitan planning organizations
MRF	Materials Recovery Facility
MRZs	Mineral Resource Zones
MS4	municipal separate storm sewer system
MUTCD	California Manual on Uniform Traffic Control Devices
MVD	Mid Valley Disposal
MW	megawatt
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NEHRP	National Earthquake Hazards Reduction Program
NERC	American Electric Reliability Corporation
NESC	National Electric Safety Code
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHMLAC	Natural History Museum of Los Angeles County
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO ₂	Nitrogen dioxide
NOI	notice of intent
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

O&M	operations and maintenance
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
OSHA	U.S. Occupational Safety and Health Administration
PCAP	Priority Climate Action Plan
PG&E	Pacific Gas & Electric
PM ₁₀	Respirable particulate matter
PM _{2.5}	fine particulate matter
ppb	parts per billion
PPE	personal protection equipment
ppm	parts per million
ppmw	parts per million by weight
PPV	peak particle velocity
PRC	Public Resources Code
RCRA	Conservation and Recovery Act
RCRA	Resource Conservation and Recovery Act
RCZ	raptor concentration zone
RHNA	Regional Housing Needs Allocation
ROG	reactive organic gases
ROW	right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAQMD	the South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	state implementation plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVHCP	San Joaquin Valley Habitat Conservation Plan
SJVUAPCD	San Joaquin Valley Unified Air Pollution Control District
SMARTS	Stormwater Multiple Applications and Report Tracking Systems
SO ₂	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
SPFC	State Plan of Flood Control
SPL	sound pressure level
SR	State Route
SRA	State Responsibility Area
SVP	Society of Vertebrate Paleontology
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board

TAC	toxic air contaminant
TMDL	total maximum daily load
tpy	tons per year
TSP	tubular steel pole
USACE	U.S. Army Corps of Engineers
USBR	Bureau of Reclamation
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UXO	unexploded ordnance
VdB	vibration decibel
VELB	valley elderberry longhorn beetle
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WDR	waste discharge requirement
WEAP	Worker's Environmental Awareness Program
WECC	Western Electricity Coordinating Council
WMP	Waste Management Plan
WQOs	Water Quality Objective
WUI	wildland-urban interface
ZEV	zero-emission vehicle

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1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

LS Power Grid California, LLC (LSPGC or Applicant) filed an application (A.24-06-017) with the California Public Utilities Commission (CPUC) on June 28, 2024, for a certificate of public convenience and necessity (CPCN) authorizing the construction of the Manning 500/230 Kilovolt (kV) Substation Project (project). The CPCN application includes project components from both LSPGC and Pacific Gas & Electric (PG&E). While LSPGC is the project applicant, the PG&E components are analyzed alongside the LSPGC components in this California Environmental Quality Act (CEQA) document prepared for the project. Following certification of this CEQA document, PG&E would file its own separate Notice of Construction under a General Order (GO) 131-E Section III.B exemption. This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the CPUC to evaluate potential environmental effects resulting from both the proposed LSPGC facilities and the proposed PG&E facilities. Section 2 “Project Description” presents detailed project information. This IS/MND includes applicant-proposed measures from LSPGC, construction measures from PG&E, and measures developed to address impacts from LSPGC’s scope of work and PG&E’s scope of work, including monitoring obligations for LSPGC and PG&E.

The LSPGC portion of the project entails construction and operation of the new Manning Substation and one new overhead double-circuit 230 kV transmission line that would extend approximately 12 miles from the proposed Manning Substation to interconnect with PG&E’s existing Tranquillity Switching Station. There are no plans to decommission the LSPGC and PG&E project components, but decommissioning may occur in the future. Therefore, this IS/MND assumes that decommissioning would have similar construction vehicle use, and thus similar impacts, to project construction. Impacts from project decommissioning are included in this IS/MND where relevant. Where decommissioning is not discussed, it is assumed there would be no impact from future decommissioning of the project components.

The PG&E portion of the project would interconnect PG&E’s existing Los Banos–Midway #2 500 kV transmission line, Los Banos–Gates #1 500 kV transmission line, and Panoche–Tranquillity Switching Station #1 and #2 230 kV transmission lines to the proposed Manning Substation. Approximately 7 miles of PG&E’s existing Panoche–Tranquillity Switching Station #1 and #2 230 kV transmission lines would be reconductored as part of the project. PG&E has determined that looping (i.e., interconnecting) the existing lines into the new substation would constitute “extensions” of existing transmission facilities pursuant to Section III.A of GO 131-E, while reconductoring the lines would constitute “modifications” of the existing transmission facilities. Therefore, PG&E plans to proceed to file its Notice of Construction under GO 131-E Section III.B instead of filing a separate application.

This document has been prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.), the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.), and CPUC GO 131-D. An initial study is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. In accordance with State CEQA Guidelines Section 15070, a “public agency shall prepare...a proposed negative declaration or mitigated negative declaration...when: (a) The Initial Study shows that there is no substantial evidence...that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects, but [r]evisions in the project plans or proposals to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level.”

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into LSPGC’s components of the proposed project. Similarly, PG&E has developed and incorporated construction measures (CMs) into PG&E’s components of the proposed project. The APMs and the CMs developed by LSPGC and PG&E, respectively, are considered binding descriptions of project design and implementation that are integral to the project.

This IS/MND considers LSPGC and PG&E project components together as the whole of the action being evaluated as the proposed project pursuant to State CEQA Guidelines Section 15378(a). When needed to reduce impacts below

the level of significance, additional measures are identified in this IS/MND. As applicable to LSPGC project components, these measures are mitigation measures. Because PG&E is not an applicant in this proceeding, PG&E has committed to additional construction measures beyond those originally included in LSPGC's application, rather than mitigation measures, to reduce impacts pertinent to PG&E project components below the level of significance.

LSPGC, as the applicant and in accordance with State CEQA Guidelines Section 15070, has agreed to the mitigation measures. PG&E, as a non-applicant and reflecting the CPUC's authority under GO 131-E, has also agreed to the additional CMs. For the purposes of this IS/MND, APMs and CMs are intended to be implemented and enforced in the same way as mitigation measures consistent with Section 15126.4 of the State CEQA Guidelines.

1.2 DOCUMENT PURPOSE

As described in the environmental checklist (Chapter 3), the project would not result in any significant (i.e., significant and unavoidable) environmental impacts. Therefore, the CPUC determined that an IS/MND is the appropriate document for compliance with the requirements of CEQA. This IS/MND conforms to these requirements and to the content requirements of State CEQA Guidelines Section 15071.

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the project. CPUC is the CEQA lead agency for the project and has sole and exclusive jurisdiction over the siting and design of the project. Pursuant to CPUC GO 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric distribution 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." Therefore, public utilities are directed to consider local regulations and consult with local agencies, but the Fresno County regulations are not applicable as the County does not have jurisdiction over the project.

The purpose of this document is to present to decision-makers and the public information about the environmental consequences of implementing the project. This disclosure document is being made available to the public for review and comment. This IS/MND will be available for a 30-day public review period from March 19, 2025 to April 18, 2025.

Supporting documentation referenced in this document is available for review at:

<https://ia.cpuc.ca.gov/environment/info/ascent/manning/index.html>

Comments should be addressed to:

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If you have questions regarding the IS/MND, please call Tommy Alexander at: (213) 266-4748. If you wish to send written comments (including via e-mail), they must be postmarked by April 18, 2025.

After comments are received from the public and reviewing agencies, the CPUC may (1) adopt the MND and approve the project; (2) undertake additional environmental studies; or (3) abandon the project.

1.3 DOCUMENT ORGANIZATION

This IS/MND is organized as follows:

- ▶ Chapter 1: Introduction. This chapter provides an introduction to the environmental review process. It describes the purpose and organization of this document.
- ▶ Chapter 2: Project Description and Background. This chapter describes the purpose of and need for the proposed project, identifies project objectives, and provides a detailed description of the project.
- ▶ Chapter 3: Environmental Checklist. This chapter presents an analysis of a range of environmental issues identified in the CEQA environmental checklist and determines if project actions would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. The thresholds of significance are based on the checklist presented in Appendix G of the CEQA Guidelines and questions provided in the CPUC's Proponent's Environmental Assessment. If any impacts were determined to be potentially significant, an EIR would be required. For this project, however, none of the impacts were determined to be significant after implementation of mitigation measures.
- ▶ Chapter 4: References. This chapter lists the references used in preparation of this IS/MND.
- ▶ Chapter 5: List of Preparers. This chapter identifies report preparers.

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2 PROJECT DESCRIPTION

2.1 INTRODUCTION

On June 28, 2024, LS Power Grid California, LLC (LSPGC or Applicant) filed an application (A.24-06-017) with the California Public Utilities Commission (CPUC) for a certificate of public convenience and necessity (CPCN) authorizing the construction of the Manning 500/230 Kilovolt (kV) Substation Project (project or proposed project). The proposed project entails construction and operation of the new Manning Substation and one new approximately 11.5-mile overhead double-circuit 230 kV transmission line that would extend from the proposed Manning Substation to interconnect with Pacific Gas and Electric Company's (PG&E) existing Tranquillity Switching Station. The project would also include interconnections, reconductoring, and related modification of PG&E's existing transmission lines and related facilities.

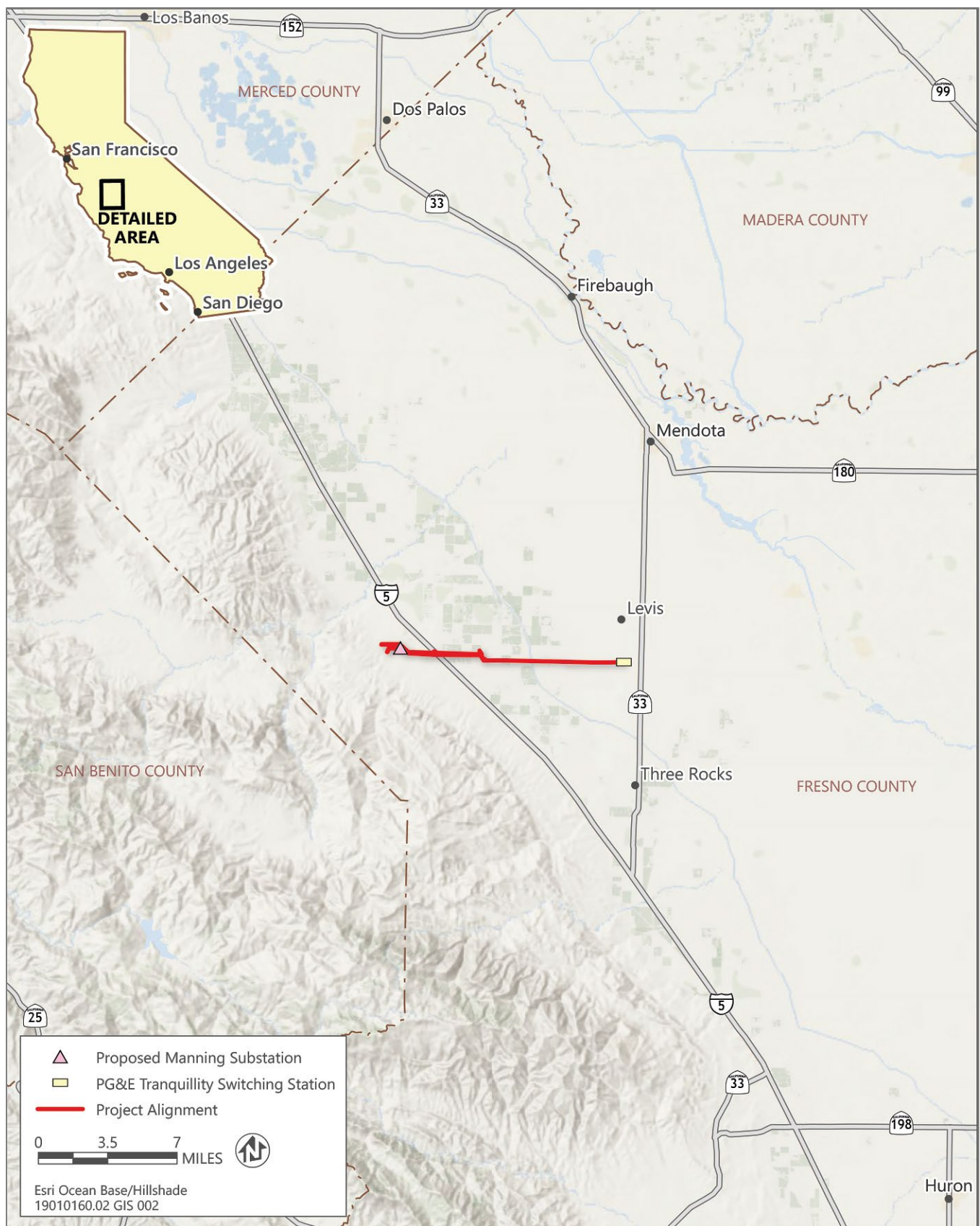
The proposed project, for the purpose of this California Environmental Quality Act (CEQA) analysis, includes the Manning Substation and other facilities proposed by LSPGC as well as PG&E's proposed actions related to facility interconnection. The proposed project was identified by the California Independent System Operator (CAISO) to address electrical reliability and capacity issues in the Fresno area, as well as to allow advancement of renewable energy generation in the San Joaquin area (CAISO 2022).

2.2 PROJECT LOCATION

The proposed project is located in western Fresno County, east of the Bureau of Land Management's Tumey Hills recreation area, and south of Manning Avenue. The eastern terminus of the proposed project is approximately 12 miles west of the City of San Joaquin (Figure 2-1). The proposed Manning Substation would be located on approximately 40 acres about 0.85 mile southwest of the Interstate 5 (I-5) and Manning Avenue interchange and approximately 1.5 miles east of the Bureau of Land Management's Tumey Hills recreation area (Figure 2-2). The approximately 11.5-mile LSPGC double-circuit 230 kV transmission line would extend east across I-5 from the proposed Manning Substation and connect to PG&E's existing Tranquillity Switching Station at the intersection of South Ohio Avenue and West Dinuba Avenue (Figure 2-2). The project would be part of the regional transmission system interconnecting PG&E's existing Los Banos-Midway #2 500 kV, Los Banos-Gates #1 500 kV, and Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission lines to the proposed Manning Substation (Figure 2-2). PG&E's existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines would be extended approximately 0.7 mile and 1.1 miles generally east from their existing corridors, across privately owned agricultural lands, before interconnecting with the proposed Manning Substation. PG&E's existing Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line would extend from its existing corridor, crossing privately owned agricultural lands and I-5 for approximately 4.5 miles before interconnecting with the proposed Manning Substation. An existing, approximately 7-mile-long segment of PG&E's existing Panoche-Tranquillity Switching Station #1 and #2 230 kV Transmission Line would be reconducted between Interconnection 2, shown on Figure 10 of Appendix A, and PG&E's existing Tranquillity Switching Station. This segment would cross privately owned agricultural lands and the California Aqueduct.

2.3 EXISTING PROJECT ALIGNMENT SETTING

The project alignment and vicinity consists of primarily agricultural lands (Figure 2-2). A portion of the project would cross I-5 and the California Aqueduct. The project alignment would be accessed during construction using existing paved and unpaved roads, new permanent access roads, and temporary access roads, as described in more detail in Section 2.6, "Project Overview" and Section 2.8, "Project Construction." Existing paved roads are typically maintained by Fresno County, while unpaved roads are typically on private lands within existing agricultural fields or roads that were established to provide access to PG&E's existing transmission infrastructure. Because of the agricultural nature of the project alignment and vicinity, some county-maintained public roads are dirt roads.



Source: Adapted by Ascent in 2024.

Figure 2-1 Regional Project Location



Figure 2-2 Project Alignment

2.4 EXISTING SYSTEM SETTING

The proposed project is located in Fresno County within PG&E's service territory and existing regional transmission system (Figure 2-2). PG&E's existing electrical infrastructure in the area of the project alignment includes the following:

- ▶ Tranquillity Switching Station
- ▶ Transmission line corridors:
 - Panoche-Excelsior #1 and #2 115 kV transmission line
 - Gates-Panoche #1 and #2 230 kV transmission line
 - Panoche-Tranquillity Switching Station #1 and #2 kV transmission line
 - Las Aguilas-Panoche #1 and #2 230 kV transmission line
 - Panoche-Panoche Energy Center 230 kV transmission line
 - Los Banos-Midway #2 500 kV transmission line
 - Los Banos-Gates #1 500 kV transmission line
- ▶ Panoche Energy Center (non-PG&E owned facility)
- ▶ Tranquillity and Las Aguilas switching stations
- ▶ Panoche, Los Banos, and Gates substations

Existing transmission line specifications are included in Table 2-1. In addition to PG&E's existing infrastructure, the existing Southern Power-, PKA-, and PenSam-owned Tranquillity Solar Facility is located adjacent to PG&E's existing Tranquillity Switching Station. Figure 2-3 shows the existing facilities and connections around the project alignment.

Table 2-1 Existing Transmission Line Specifications

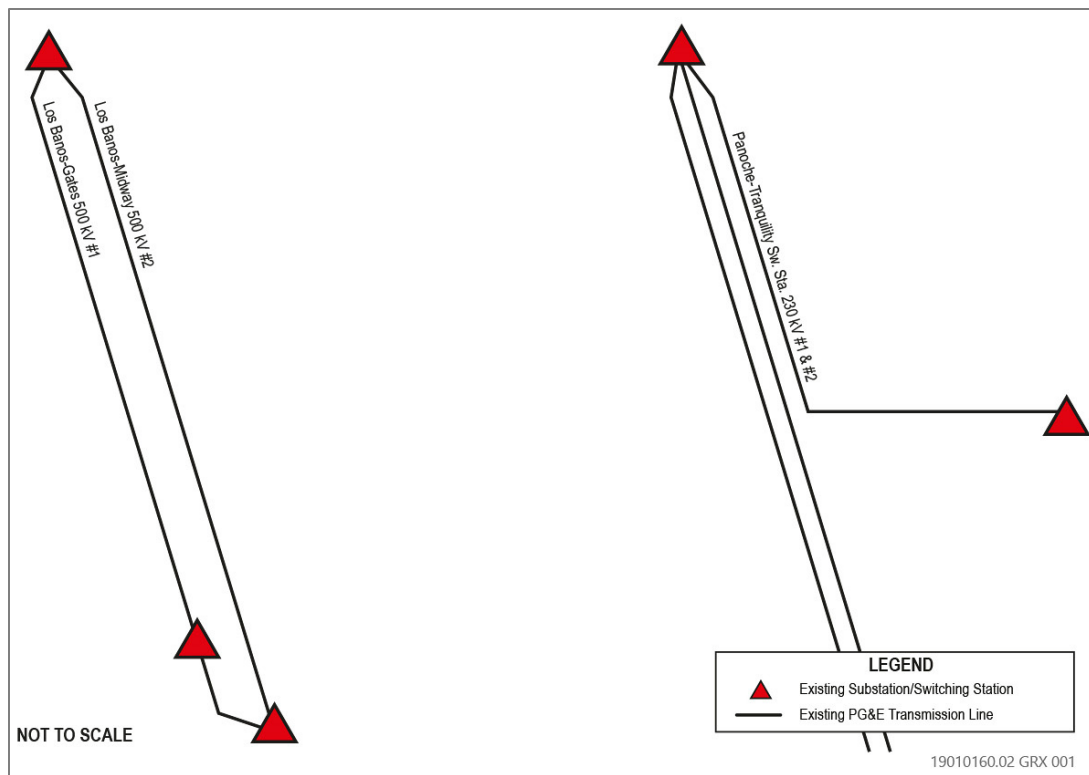
Transmission Line Name	ROW Width (feet)	Typical Existing Structure Spacing	Existing Structure Footprint (square feet)	Existing Structure Height (feet)	Existing Foundation Type	Existing Foundation Depth (feet)
Los Banos-Midway #2 500 kV transmission line	200	1,000 – 1,300	1,200	100 to 160	Drilled Pier	20
Los Banos-Gates #1 500 kV Transmission Line	200	1,000 – 1,300	1,200	100 to 160	Drilled Pier	20
Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line	75	800 – 1,300	1,600	70 to 180	Drilled Pier	10

Note: The Gates-Panoche #1 and #2 230 kV transmission line, Las Aguilas-Panoche #1 230 kV transmission line, Panoche-Panoche Energy Center 230-kV transmission line, and Panoche-Excelsior #1 and #2 115 kV transmission line are not included in the table as specifications are not available.

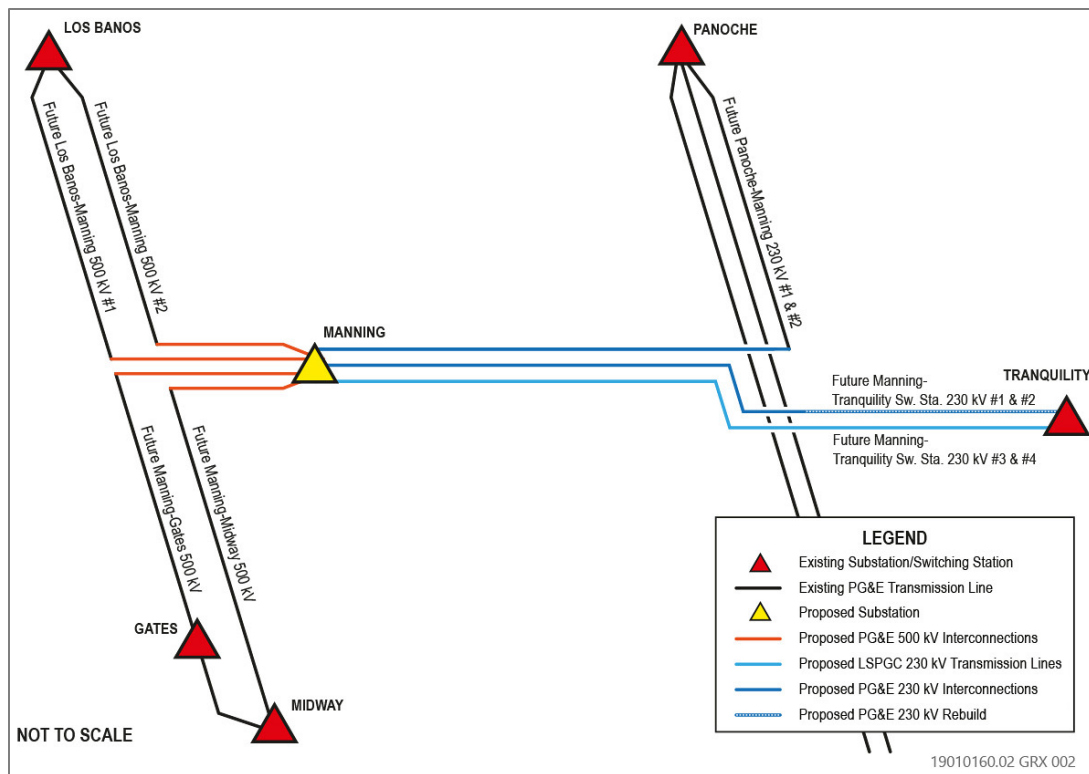
Source: Modified by Ascent in 2024.

The Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines originate at PG&E's existing Los Banos Substation and travel generally south and within the same transmission corridor through the project area until terminating at the Midway Substation and Gates Substation, respectively.

The Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line originates at PG&E's existing Panoche Substation, travels south to the project alignment area, and then turns east just north of the intersection of South Jerrold Avenue and West Dinuba Avenue (i.e., Panoche Junction). This line then travels approximately 7 miles east before reaching PG&E's existing Tranquillity Switching Station.



Existing System Diagram



Proposed System Diagram

Source: Image prepared and provided by Insignia Environmental in 2024; adapted by Ascent in 2024.

Figure 2-3 Existing and Proposed System Diagrams

The Panoche-Excelsior #1 and #2 115 kV transmission line originates at PG&E's existing Panoche Substation, travels southeast through the project alignment area and generally continues southeast until Excelsior Avenue, and then continues east to PG&E's existing Excelsior Substation.

The Gates-Panoche #1 and #2 230 kV transmission line originates at PG&E's existing Gates Substation and generally travels northwest through the project alignment area to PG&E's existing Panoche Substation.

2.4.1 Existing System Reliability

The existing system currently experiences overloads under normal and contingency conditions as determined by CAISO (CAISO 2022). With insufficient transmission capacity and lower voltages, the system has become less reliable. Overloads to the system result in insufficient transmission capacity, transmission losses, minor disturbances, and interruptions to service, all of which limit the deliverability of renewable resources.

2.5 PROJECT OBJECTIVES

The objectives for the proposed project, as identified by LSPGC and PG&E, are to:

- ▶ Meet CAISO's policy-driven need for the project to address overloads on the Borden-Storey #1 and #2 230 kV transmission lines (CAISO 2022).
- ▶ Meet the functional specifications set forth by CAISO for the proposed Manning Substation and 230 kV transmission lines located near or adjacent to the existing PG&E Los Banos-Midway #2 and Los Banos-Gates #1 500 kV transmission lines and existing PG&E Panoche-Tranquillity #1 and #2 230 kV transmission line.
- ▶ Achieve commercial operation by June 2028 to address critical reliability issues within the transmission system, such as high voltage under non-peak conditions and voltage that varies significantly on a daily basis.
- ▶ Improve and maintain the reliability of the transmission grid and increase deliverability of renewable power by building and operating a facility that would help to maintain voltage levels, reduce transmission losses, increase transmission capacity, and improve overall system resilience.
- ▶ Facilitate deliverability of load from existing and proposed renewable generation projects in the Fresno/San Joaquin area.
- ▶ Construct and operate the facility with safety as a top priority.
- ▶ Comply with and assist CAISO in meeting applicable Reliability Standards and Criteria developed by the North American Electric Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and CAISO.
- ▶ Design and construct the project in conformance with LSPGC's standards, CPUC General Order (GO) 95, and other applicable national and state codes and regulations.

2.6 PROJECT OVERVIEW

The proposed project includes the construction and operation of the proposed LSPGC Manning Substation. The proposed project also includes a new LSPGC 230 kV transmission line (Manning-Tranquillity Switching Station #3 and #4 230 kV transmission line or the LSPGC 230 kV transmission line), connecting the proposed Manning Substation to PG&E's existing Tranquillity Switching Station. The optical ground wire installed on the proposed LSPGC 230 kV transmission line would serve as the telecommunication path. The proposed Manning Substation would connect to PG&E's existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines. The resulting PG&E 500 kV transmission lines would be called Los Banos-Manning #1 and #2, Manning-Gates, and Manning-Midway. Additionally, the project would connect PG&E's existing Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line to the proposed Manning Substation. The resulting PG&E 230 kV transmission lines would be called Panoche-Manning #1 and #2 and Manning-Tranquillity Switching Station #1 and #2. The project would create an

additional transmission path and increase the transfer capacity between the existing PG&E 230 kV and 500 kV systems. The interconnecting facilities would create a loop to improve reliability. An existing PG&E 12 kV distribution line would be extended to the proposed Manning Substation to provide a temporary power source during construction, backup power for LSPGC during operation and maintenance, and permanent power to PG&E's IT facility/communications building. The project alignment, rights-of-way, pulling areas, staging areas, disturbance areas, and access roads are herein referred to as the "project alignment area."

To support the connection of the Manning Substation to PG&E's electrical system, structure raises and installation of transposition structures (i.e., where the relative positions of the conductors of the transmission lines are swapped at specific intervals) would occur along PG&E's existing lines, and short segments of PG&E's existing lines would be re-routed. Modifications and upgrades would also be required at the Panoche Energy Center; PG&E's existing Tranquillity and Las Aguilas switching stations; and PG&E's existing Panoche, Los Banos, Gates, and Midway substations. The proposed configuration of the project facilities and detailed project features of the project alignment area are shown in Figure 2-3, and a mapbook is included as Appendix A. Project components are described in more detail below.

2.6.1 Proposed LSPGC Facilities

Project facilities proposed by LSPGC include construction of the new Manning Substation; a new, approximately 11.5-mile, overhead, double-circuit 230 kV transmission line connecting the Manning Substation to PG&E's existing Tranquillity Switching Station; and the extension of an underground fiber-optic cable adjacent to the Tranquillity Switching Station to connect to the optical ground wire of the proposed 230 kV transmission line.

230 KV TRANSMISSION LINE

The proposed 230 kV transmission line would be constructed from the Manning Substation approximately 11.5 miles east to PG&E's existing Tranquillity Switching Station. The preliminary design for the transmission line would require up to 51 tangent tubular steel poles (TSPs), four guyed six-pole dead-end TSPs, one dead-end TSP, two running angle TSPs, and one two-pole dead-end TSP. Typical drawings of the poles to be installed are provided in Figure 2-6. Each tangent TSP and guyed six-pole dead-end TSP is anticipated to be no more than 180 feet tall and would be direct-buried at a typical underground depth of 25 feet. Tangent TSPs would be approximately 6 feet in diameter and guyed six-pole dead-end TSPs would be approximately 12 feet in diameter. Guy wires installed on concrete pier foundations may be required in some locations. The dead-end TSP would be no more than 199 feet tall with a diameter of 12 feet and a typical depth of 40 feet below ground. The running angle TSPs would be no more than 145 feet tall with a diameter of 6 feet and would have a typical depth of 36 feet below ground. The two-pole dead-end TSP is anticipated to be no more than 140 feet tall with a diameter of 8 feet and would have a typical underground depth of 40 feet. The running angle TSPs, two-pole dead-end TSP, and dead-end TSP would be installed on concrete pier foundations. Conductors and ground wires would be spaced sufficiently so that raptors cannot contact two conductors or one conductor and a ground wire, causing electrocution. Optical ground wire would be installed above the primary conductors along the proposed transmission line.

MANNING SUBSTATION

The Manning Substation would be located on approximately 40 acres (substation site). Ancillary facilities on 29 acres of the substation site would include an access road, telecom yard, and staging area, which would be graded for the project. Primary facilities would be located on 11 acres of the substation site and would include the following:

- ▶ lightning shielding masts;
- ▶ 500-kV, gas-insulated switchgear with nine 500-kV hexafluoride gas-insulated circuit breakers and associated disconnect switches, current transformers, and voltage transformers;
- ▶ two 500-kV series capacitors;
- ▶ 500-kV surge arresters;
- ▶ 500-kV hexafluoride gas-insulated bus;

- ▶ 230-kV gas-insulated switchgear with twelve 230-kV hexafluoride gas-insulated circuit breakers and associated disconnect switches, current transformers, and voltage transformers;
- ▶ 230-kV surge arresters;
- ▶ 230-kV group-operated disconnect switches;
- ▶ potential transformers;
- ▶ 230-kV station service transformers;
- ▶ 230-kV hexafluoride gas-insulated bus;
- ▶ seven single-phase step down mineral oil immersed type autotransformers;
- ▶ communications enclosure (for PG&E);
- ▶ optical ground wire fiber cables for the 230-kV telecommunication path;
- ▶ a Supervisory Control and Data Acquisition (SCADA) system consisting of fully redundant servers; power supplies; and ethernet local area network and wide area network connections, routers, firewalls, and switches;
- ▶ two control enclosures;
- ▶ four dead ends for the 500-kV lines;
- ▶ six dead ends for the 230-kV lines; and
- ▶ outdoor heating, ventilation, and air conditioning equipment (for control enclosures only).

All major terminal equipment (e.g., power transformers, series capacitors, and gas-insulated switchgear enclosures) would be installed on concrete foundations. Each transformer would have an oil containment system consisting of an impervious, lined, and open or stone-filled sump area around the transformer. The maximum amount of oil required for the transformers would be approximately 25,000 gallons for each of the seven transformers. Transformer oil containment basins would be designed to contain the oil volume of the transformers plus a 25-year, 24-hour storm event. The tallest structure within the substation site would be the approximately 160-foot-high 500 kV dead-end structures. Below-grade work for the substation site would include the construction of equipment foundations, oil containment for transformers, the grounding grid, and conduit. Typical below-ground conductors and/or cables would be 2 to 4 feet below the ground surface. The proposed layout of the substation site is shown in Figure 2-4 and the proposed equipment profiles are shown in Figure 2-5.

The substation site would be surrounded by a prefabricated interlocking security wall that would be 10 feet tall with 1 foot of barbed wire on top. The access gate would have an opening of 24 feet in width. All substation control enclosures would be painted a non-reflective, American National Standards Institute (ANSI) 70 light gray or similar neutral tone. All other substation components would have a non-reflective finish. Lighting would be installed and would conform to the National Electric Safety Code requirements and other applicable outdoor lighting codes. The facility would not require 24-hour illumination. Motion detection photocell lighting would be used to provide safety lighting at a level sufficient for safe entry and exit of the substation and control equipment enclosure. Additional manually controlled lights would be provided to ensure a safe working environment. Lighting would be shielded and pointed downward to minimize glare onto surrounding habitat.

The Manning Substation would be primarily powered by station service transformers located within the substation that would step down the voltage from the low voltage (230 kV) side of the station power transformers. An overhead 12 kV electric distribution line would be extended from PG&E's existing distribution line to provide backup power for the substation. The proposed distribution line would be extended from West Mountain Avenue north and parallel to an unnamed private road until reaching the north side of the substation, and then it would extend west approximately 340 feet. The distribution line would be installed on up to nine new wood poles. A manual disconnect switch allowing for a mobile generator to be connected would be installed for the control enclosures. This mobile generator backup would only be used in an emergency where both transmission and distribution power fail. The mobile generator would not be stored on site. All facilities, including the associated driveway, would be placed within the property boundaries of the approximately 40-acre substation site.

TELECOMMUNICATIONS EXTENSION

The proposed telecommunication extension would extend an existing fiber cable located underground on the parcel adjacent to PG&E's Tranquillity Switching Station to the optical ground wire of the proposed LSPGC 230 kV transmission line. The extension would require the installation of approximately 350 feet of new fiber cable. The extension would be buried 3 feet below ground (Appendix A, Figure 18).

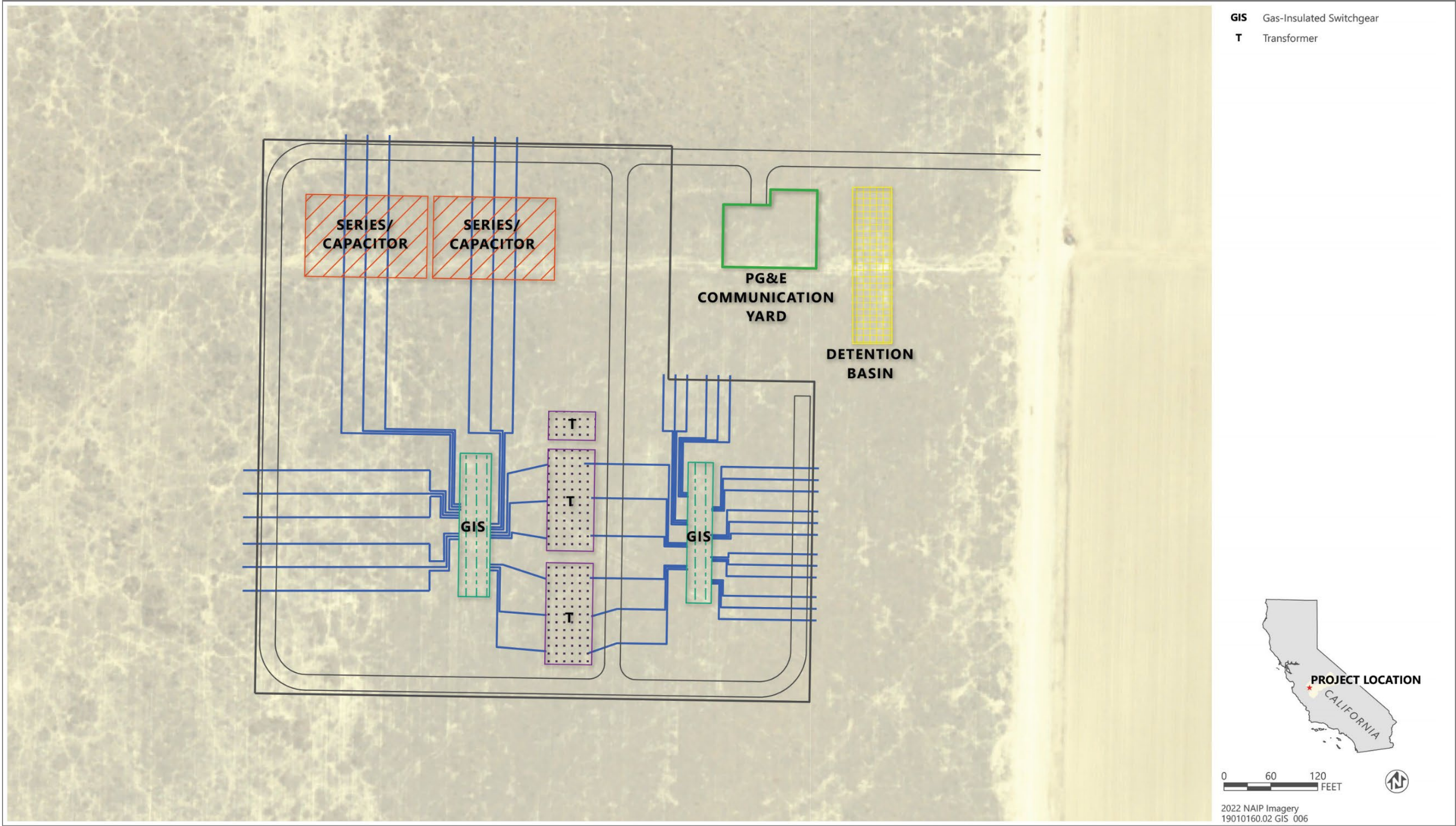
MISCELLANEOUS IMPROVEMENTS

An existing dirt road would be upgraded to provide access to the proposed Manning Substation. More specifically, the turning radius at the intersection of Manning Avenue and the unnamed private road that continues south from the intersection of South Brannon Avenue and Manning Avenue would be widened on the southeast corner of the intersection to allow larger vehicles to safely turn onto the unnamed private road. In addition, the unnamed private road would be widened by approximately 20 feet from its intersection with Manning Avenue to the proposed substation driveway.

Other existing dirt roads, such as South Brannon Avenue and the dirt road to access the Manning Substation, may require minor improvements to allow for the safe travel of construction vehicles and equipment. These improvements could include minor grading, vegetation trimming/removal, and/or the application of road base, as described in more detail in Section 2.8, "Project Construction". Incidental damage to existing roads is not expected from the project. Should incidental road damage occur, the roads would be restored to pre-construction conditions or better as required by applicable permits and/or landowner agreements.

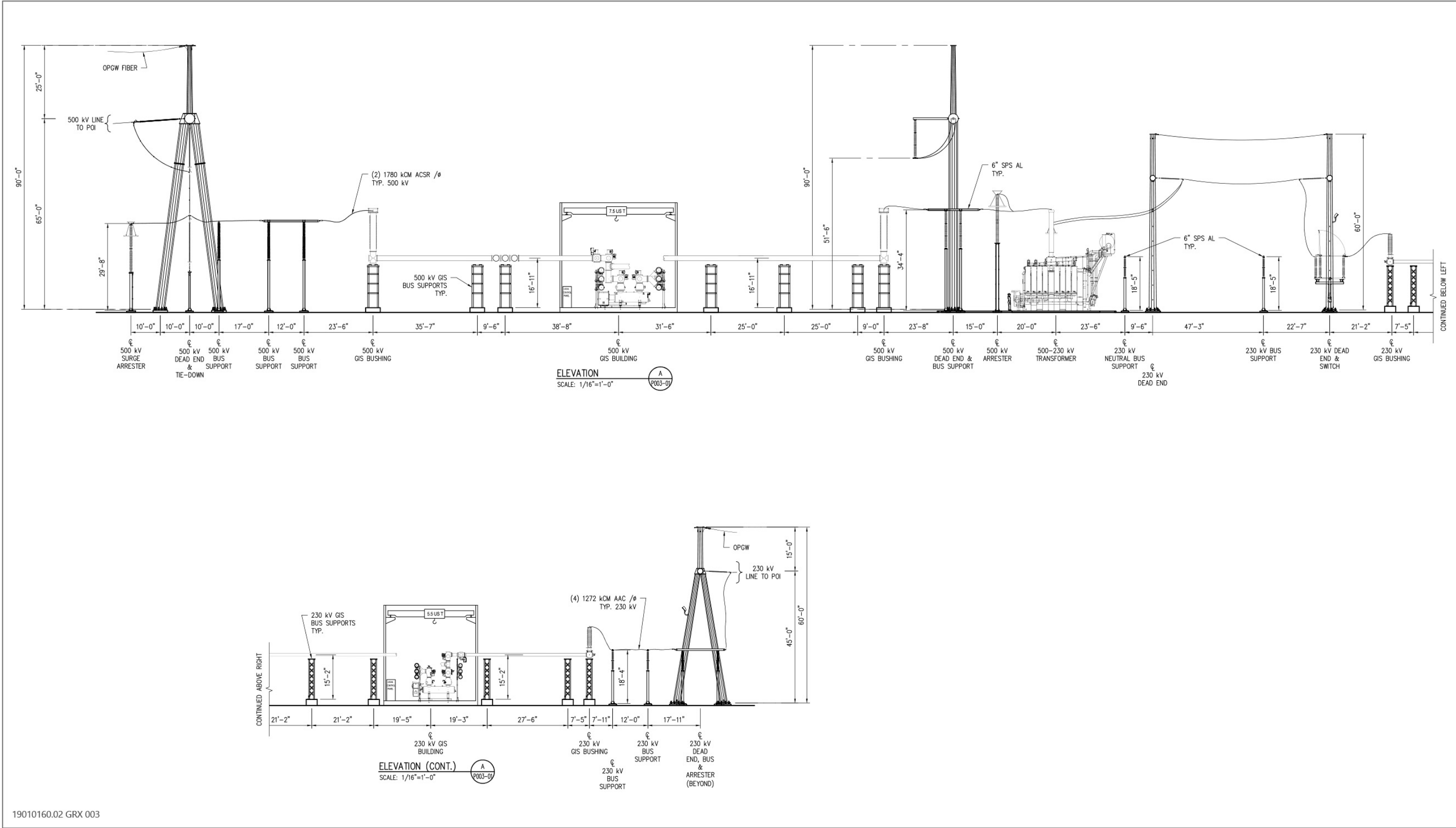
FUTURE SUBSTATION EXPANSION

While LSPGC is not planning to implement modifications to the project facilities described previously, the project has incorporated sufficient space within the proposed Manning Substation property to allow for potential future incremental modification of the substation to support increased future renewable energy-generating capacity on the electrical grid if determined by CAISO planning or interconnection agreements. If implemented, the potential future modification would require the proposed Manning Substation's southern fence line to be extended approximately 300 feet to the south, adding approximately 5 acres to the footprint of the 11-acre fenced area. This modification would include the addition of three 500-kV bays, four 230-kV bays, and one transformer bank, including three single-phase transformers. The modification could enable four additional 500-kV lines and four additional 230-kV lines to be interconnected to the expanded facility. The substation site has sufficient space to accommodate this modification should it be required. The estimated timeframe for any future facilities is approximately 10 years from the energization of the proposed Manning Substation. There are no future modifications or extensions planned for the proposed LSPGC 230 kV transmission line. The environmental analysis considers the proposed future expansion of the Manning Substation on the approximately 40-acre site as shown in Appendix A, Figure 5.



Source: Image prepared and provided by Insignia Environmental in 2024; adapted by Ascent in 2024.

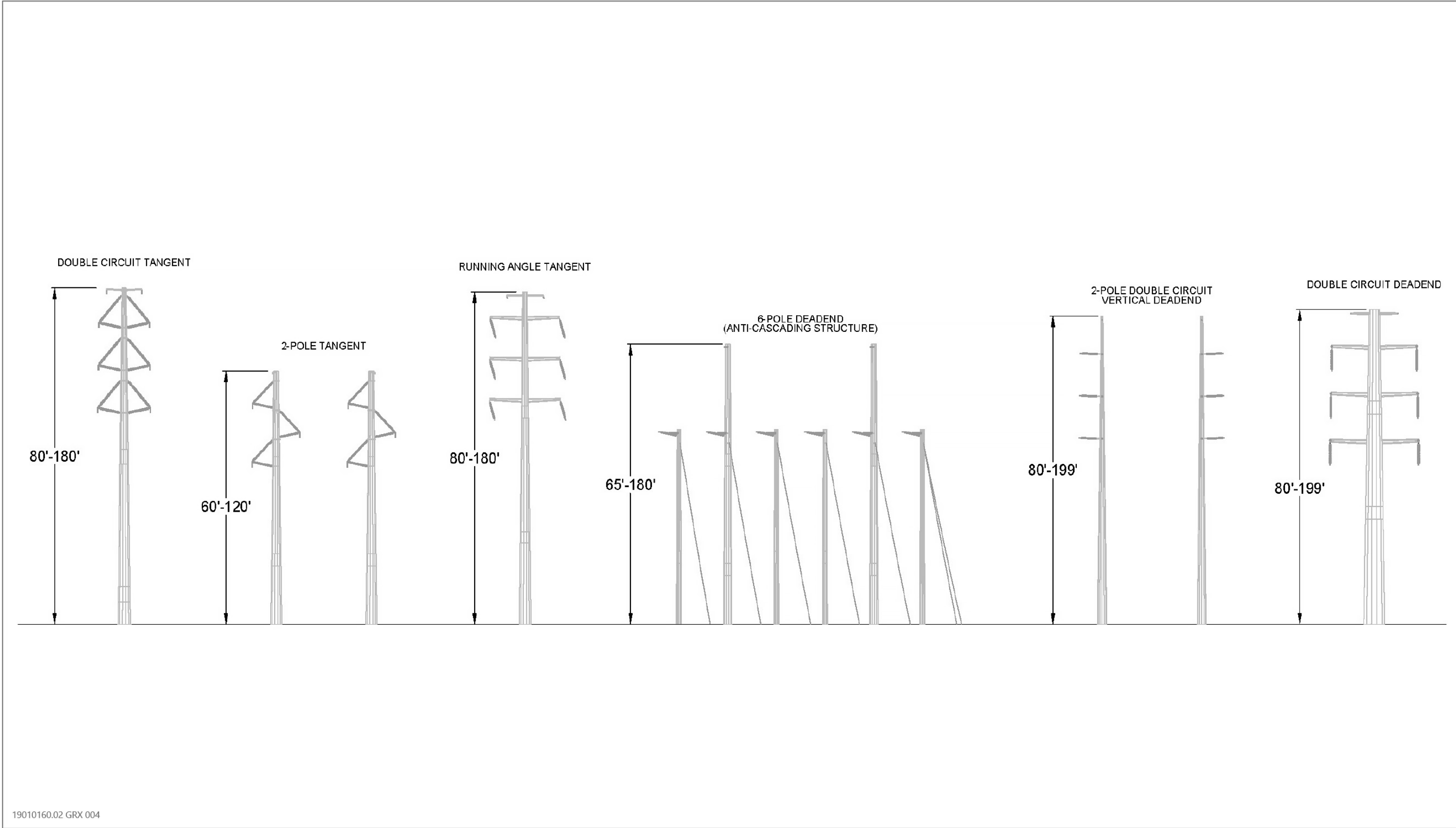
Figure 2-4 Manning Substation Layout



19010160.02 GRX 003

Source: Image prepared and provided by Insignia Environmental in 2024; adapted by Ascent in 2024.

Figure 2-5 Manning Substation Equipment Elevation Profiles



Source: Image prepared and provided by Insignia Environmental in 2024; adapted by Ascent in 2024.

Figure 2-6 Proposed Tubular Steel Poles

2.6.2 Proposed PG&E Facilities

PG&E's proposed project components include the extension of two existing 500-kV circuits resulting in four new 500-kV single-circuit transmission line segments; the extension of one 230-kV double-circuit transmission line resulting in two new 230 kV double-circuit transmission line segments; the reconductoring of an existing 230-kV double-circuit transmission line segment; the installation of a 12-kV distribution line; and modifications to existing PG&E transmission lines, two existing switching stations, and four existing substations, as described in the following subsections (Figure 2-2). PG&E would also construct and own a telecommunications yard within the Manning Substation site.

500 KV INTERCONNECTIONS

As part of the project, PG&E would extend its existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines to the Manning Substation with an approximately 0.7-mile-long interconnection corridor and 1.1-mile-long interconnection corridor, respectively (each interconnection corridor would contain two lines). These two new interconnection lines would be installed as two corridors: one with up to 10 lattice steel towers (LST), and the other with up to 12 TSP structures, as shown in Appendix A, Figures 2 through 4.

The interconnections would split the existing Los Banos-Midway #2 500 kV transmission line, extending the line to the Manning Substation and changing its name to the Los Banos-Manning #2 500 kV transmission line (between Los Banos and Manning substations) and the Manning-Midway 500 kV transmission line (between Manning and Midway substations). The existing Los Banos-Gates #1 500 kV transmission line would similarly be split and become the Los Banos-Manning #1 500 kV transmission line (between Los Banos and Manning substations) and the Manning-Gates 500 kV transmission line (between Manning and Gates substations). This component of the project is collectively referred to as the PG&E 500 kV Interconnections (Appendix A, Figures 2 through 4). As part of the PG&E 500 kV Interconnections, an approximately 2,500-foot-long segment of two existing PG&E 500 kV transmission lines and approximately four existing transmission line structures would be removed between the interconnection points.

On PG&E's existing Los Banos-Midway #2 500 kV transmission line and Los Banos-Gates #1 500 kV transmission line, five new three-pole dead-end TSP transposition structures would be added to the existing right-of-way (ROW) between existing lattice steel structures. The structures would each have a maximum height of 145 feet above ground. Each structure would be installed on concrete pier foundations with a diameter of approximately 12 feet and a typical depth of 40 feet below ground (Figure 2-7).

230 KV INTERCONNECTIONS

As part of the project, PG&E would extend the Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line to the proposed Manning Substation. The existing transmission line would be split and extended to the proposed Manning Substation on approximately 53 TSP structures, resulting in two approximately 4.5-mile-long double circuit extensions between the existing line corridor and the proposed Manning Substation. An approximately 2,500-foot-long segment of existing double circuit transmission line conductors and approximately two existing transmission line structures would be removed between the two interconnections of the existing Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line to support the 230 kV transmission line extension.

These interconnections would create the proposed Panoche-Manning #1 and #2 230 kV transmission line and the proposed Manning-Tranquillity Switching Station #1 and #2 230 kV transmission line, and are hereafter referred to as the PG&E 230 kV Interconnections (Appendix A, Figures 5 through 8).

230 KV RECONDUCTORING

An approximately 7-mile-long segment of PG&E's existing 230-kV transmission line (Panoche-Tranquillity Switching Station #1) would be reconductored to increase the capacity to 3,000 amperes (A) (PG&E 230 kV Reconductoring)

(Appendix A, Figures 5 through 8). Interconnection 2, as shown in Figure 10 of Appendix A, is approximately 4.1 miles east of the proposed Manning Substation. This reconductoring, hereafter referred to as the PG&E 230 kV Reconductoring, would include replacing the existing conductors and their supporting structures within PG&E's existing ROW. The larger conductors would require galvanized steel TSPs with a dull gray finish.

12 KV DISTRIBUTION LINE

An approximately 0.5-mile-long overhead 12 kV electric distribution line would be extended on approximately nine wood poles from PG&E's existing distribution line at West Mountain Avenue to the Manning Substation to serve as a temporary power source during construction and to provide backup power to LSPGC during operation and maintenance and permanent power for PG&E's communications building (PG&E 12-kV distribution line) (Appendix A, Figure 5). The maximum pole height would be approximately 40 feet above ground. Each pole would have a diameter of approximately 3.5 feet and be buried to a typical depth of 6 feet below ground.

230 KV AND 115 KV STRUCTURE RAISES

Between the existing Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line, the Gates-Panoche 230 kV #1 and #2 230 kV transmission line and the Panoche-Excelsior 115 kV #1 and #2 transmission line would be raised to allow the proposed LSPGC 230 kV transmission line and PG&E 230 kV Interconnections to maintain proper ground clearance at the crossing. At the location of the crossing, approximately five structures on each existing line would be replaced with approximately five new TSP structures per line (Appendix A, Figures 10 and 11). TSP structures would have a maximum height of 199 feet with approximately 8 to 12-foot-diameter foundations.

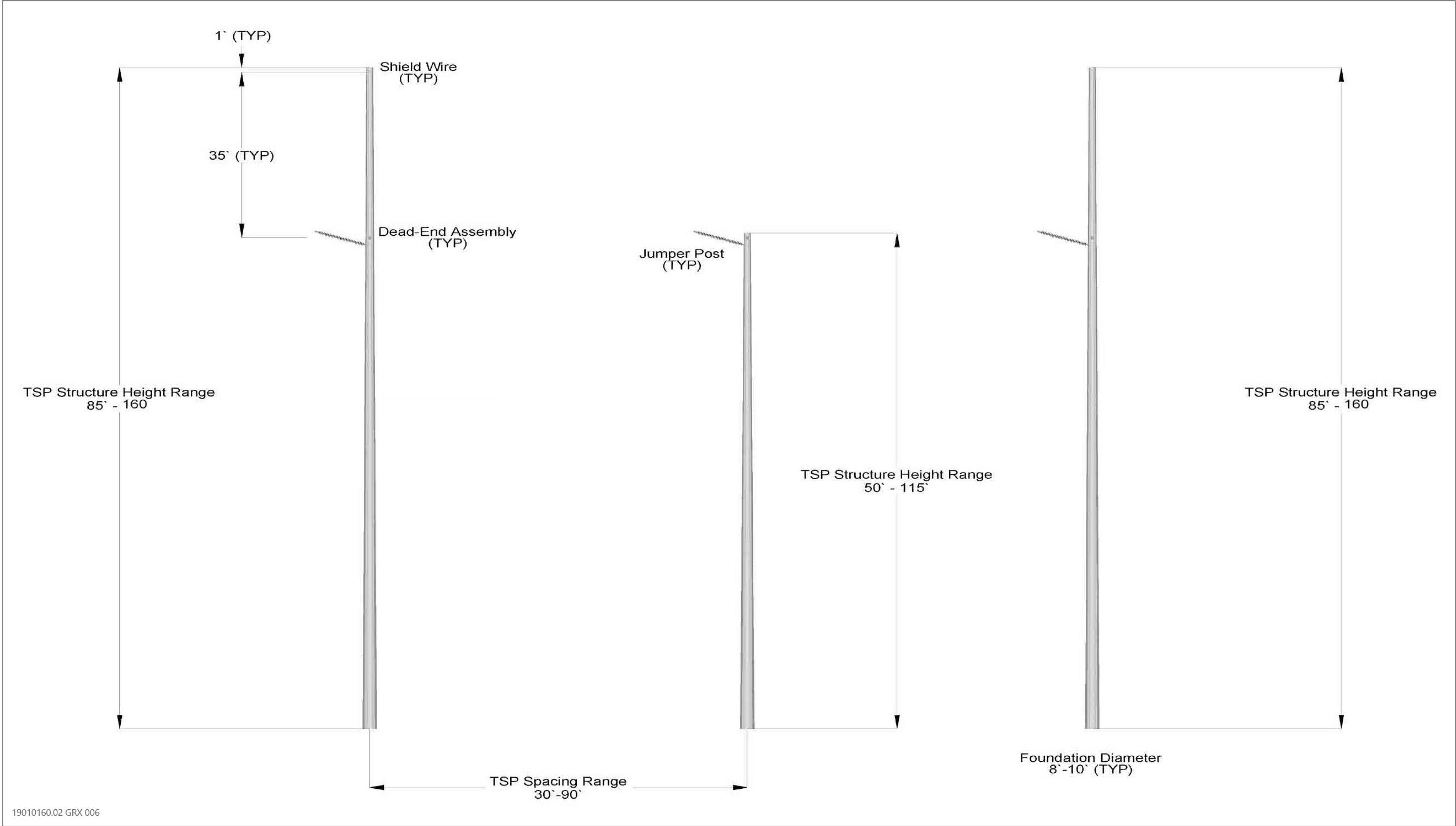
PANOCHES SUBSTATION MODIFICATION

Adjacent to PG&E's existing Panoche Substation, the existing Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line, Gates-Panoche #1 and #2 230 kV transmission line, the Las Aguilas-Panoche #1 230 kV transmission line, and the Panoche-Panoche Energy Center 230kV transmission line would be re-routed into the new breaker-and-a-half configuration inside the Panoche Substation (Appendix A, Figure 19). Approximately two temporary structures and approximately seven new TSP structures would be installed to support the line re-routes. TSP structures would be approximately 120- to 160-feet tall with approximately 3- to 12-foot-diameter foundations. The temporary structure would have a diameter of approximately 3 feet and would be direct buried at a typical depth of 14 feet below ground. The permanent TSPs would be installed on concrete pier foundations each with an approximately 12-foot diameter and a typical depth of 40 feet below ground with an approximate height of 160 feet above ground (Figure 2-8). Approximately five existing structures would be removed as part of the re-routes.

500 KV TRANSPOSITION STRUCTURES

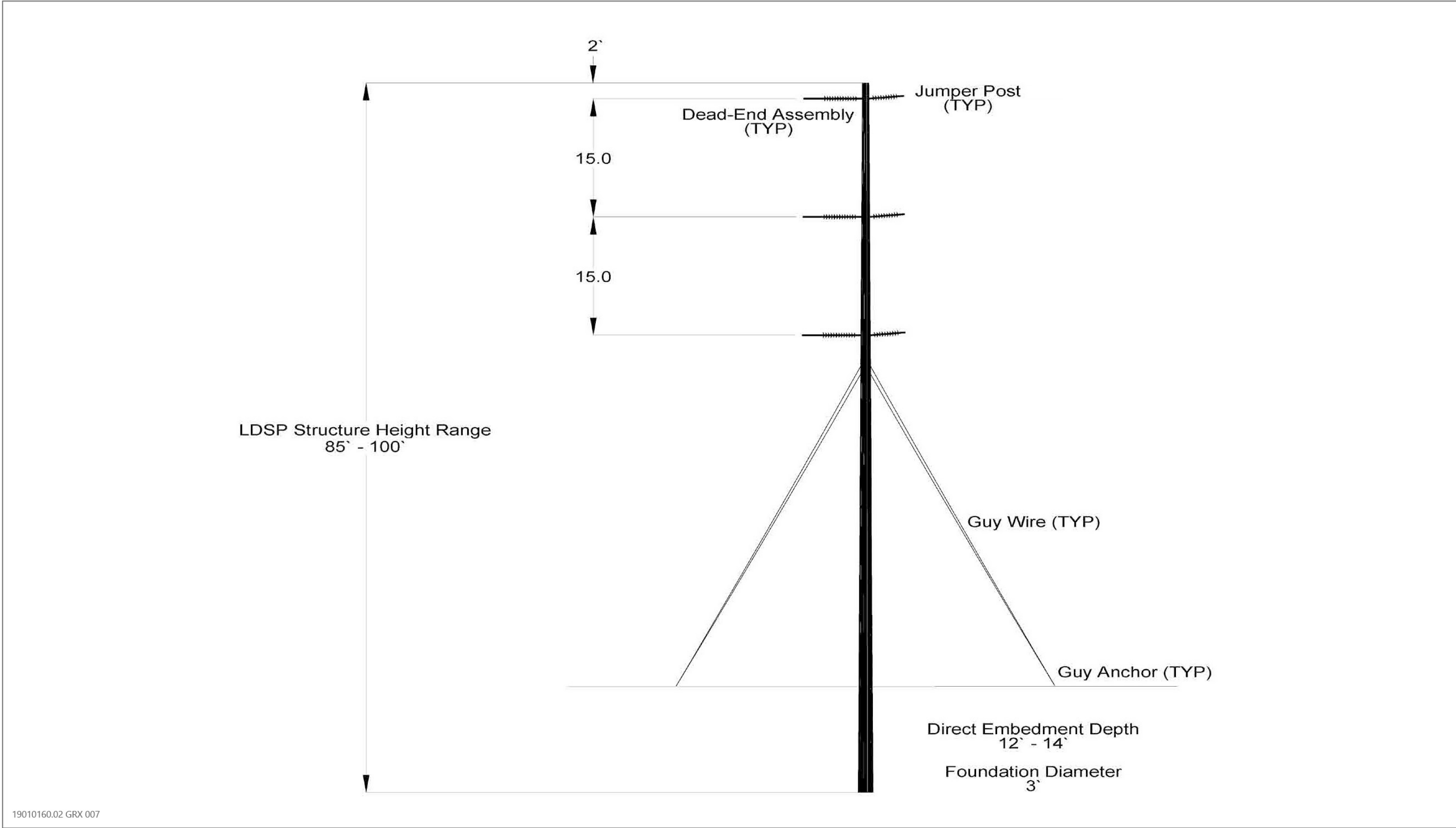
On PG&E's existing Los Banos-Midway #2 500 kV transmission line and Los Banos-Gates #1 500 kV transmission line, approximately 5 new three-pole dead-end TSP transposition structures would be added to the existing ROW between existing lattice steel structures to balance electrical current between the conductors of the transmission lines by swapping their relative positions at specific intervals. Each transposition structure would have an approximate maximum height of 145 feet tall with a foundation diameter of approximately 12 feet. The transposition structures would be installed at the following approximate locations:

- ▶ 27 miles south of the Manning Substation,
- ▶ 25 miles north of the Manning Substation,
- ▶ 10 miles south of the Manning Substation, and
- ▶ 5 miles south of the Manning Substation.



Note: TYPE = typical.
Source: Image prepared and provided by Insignia Environmental in 2024; adapted by Ascent in 2024.

Figure 2-7 Typical Drawing of Three-Pole Transposition Structure



Source: Image prepared and provided by Insignia Environmental in 2024; adapted by Ascent in 2024.

Figure 2-8 Typical Drawing of Shoo-Fly Dead End Configuration

SWITCHING STATION/SUBSTATION MODIFICATIONS

Proposed modifications to PG&E’s existing Tranquillity Switching Station include adding two bays to facilitate the connection of the proposed LSPGC 230 kV transmission line. Proposed modifications to PG&E’s existing Las Aguilas Switching Station would require indoor relay upgrades to accommodate the proposed re-routing of the Las Aguilas-Panoche #1 230 kV transmission line to the existing Panoche Substation. In addition, the bus structures and electrical systems at the Panoche Energy Center and PG&E’s existing Panoche, Los Banos, Gates, and Midway substations would be modified to accommodate the proposed interconnections. The modifications would occur within PG&E’s existing property lines. Table 2-2 includes existing substation and switching station specifications.

The series capacitor would be modified at PG&E’s existing Gates Substation. The modification at the Los Banos Substation would also include protective relay modifications within the existing enclosures, line trap removal on the Los Banos-Gates #1 500 kV transmission line, and the potential installation of new 500 kV transmission line disconnect switches on the Los Banos-Gates #1 500 kV transmission line and Los Banos-Midway #2 500 kV transmission line. These would consist of two sets of three single-pole manually operated disconnect switches mounted atop new steel structures (two columns, two foundations per pole). The combined height of each switch and structure would be approximately 45 feet tall.

The proposed modifications at PG&E’s existing Gates Substation would be primarily limited to indoor protective relay modifications. Outdoor modifications would be limited to the potential installation of a 500 kV transmission line disconnect switch on the Los Banos-Gates #1 500 kV transmission line, which would become the Manning-Gates 500 kV transmission line. This would consist of three single-pole manually operated disconnect switches mounted atop new steel structures (two columns, two foundations per pole). The combined height of each switch and structure would be approximately 45 feet tall. Modifications to existing 500 kV series capacitor banks would take place within the control systems.

The proposed modifications at PG&E’s existing Midway Substation would include protective relay modifications within the existing enclosures, and the potential installation of a 500 kV transmission line disconnect switch on the Los Banos-Midway #2 500 kV transmission line, which would become the Manning-Midway 500 kV transmission line. Three single-pole manually operated disconnect switches would be mounted atop new steel structures (two columns, two foundations per pole). The combined height of each switch and structure would be approximately 45 feet tall.

Table 2-2 Existing Substation and Switching Station Specifications

Station Name	Approximate Size (acres)	Approximate Length (feet)	Approximate Width (feet)
Tranquillity Switching Station	7	590	490
Las Aguilas Switching Station	6	525	518
Panoche 230 kV Substation	24	1,584	950
Los Banos 500 kV Substation	36	1,584	1,584
Gates 500 kV Substation	61	2,904	2,112
Midway 500 kV Substation	91	2,640	2,112

Source: Modified by Ascent 2024.

BELOW GRADE CONDUCTOR/CABLE INSTALLATIONS

No PG&E electric transmission lines would be installed or modified below ground. Modifications within or directly adjacent to existing switching stations and substations, such as fiber communication, may include underground facilities.

PROJECT SUMMARY

Table 2-3 includes each proposed project component and the approximate size or length of each.

Table 2-3 Project Component Summary

Project Component	Size or Length
Manning Substation	11 acres ¹
LSPGC 230 kV Transmission Line	11.5 miles ²
LSPGC Telecommunication Line Extension	350 feet ²
PG&E 500 kV Interconnections	0.7 and 1.1 miles ³
PG&E 230 kV Interconnections	4.5 miles ²
PG&E 230 kV Reconductoring	7 miles ²
PG&E 230 kV and 115 kV Structure Raises	0.6 mile
PG&E 500 kV Transposition Structures	0.01 acre
PG&E Panoche Substation Interconnection Modifications	1.5 miles
PG&E 12 kV Distribution Line	0.5 mile ²

¹ The acreage includes the area within the substation fence line.

² The distances encompass the overall lengths of the respective transmission line corridors, not the cumulative total length of all the lines within those corridors.

³ The northern corridor would cross approximately 1.1 mile and the southern corridor approximately 0.7 mile.

Source: Modified by Ascent in 2024.

2.7 LAND OWNERSHIP, RIGHTS-OF-WAY, AND EASEMENTS

All of the existing facilities associated with the proposed project are located on utility-owned land or other privately owned land. The proposed Manning Substation parcel is privately owned, and LSPGC holds an exclusive option to purchase at least 40 acres of the approximately 160-acre parcel. Prior to construction, LSPGC would exercise the option and secure fee title to those 40 acres. This area is adequate to accommodate the Manning Substation, including all considerations for site grading, fencing, staging areas, equipment, internal and external access roads, and other operational considerations.

PG&E owns the existing parcels on which the existing Tranquillity and Las Aguilas switching stations are located, as well as the parcels on which the existing Panoche, Los Banos, Gates, and Midway substations are located.

The proposed PG&E 230 kV reconductoring is located within existing ROWs that are on average 75 feet in width, but as wide as 310 feet in some locations. As needed to accommodate the reconductoring scope, existing ROW may need to be expanded up to a total of 150 feet wide where it is currently too narrow. The proposed PG&E 230-kV and 115-kV structure raises would be installed within existing, approximately 75-foot-wide ROWs. The proposed PG&E 500-kV transposition structures would be installed within an existing, approximately 150-foot-wide ROW.

LSPGC does not have any existing ROW or easements in the project alignment area. LSPGC would secure new rights for installation of the proposed LSPGC 230-kV transmission line by negotiating agreements with each landowner. No demolition of existing structures is planned. The Manning-Tranquillity Switching Station #3 and #4 230 kV transmission line would be approximately 11.5 miles long and would require a typical ROW width between 100 and 120 feet for the TSPs, and up to 150 feet to accommodate dead-end structures. The ROW width would narrow to 100 feet just west of PG&E's existing Tranquillity Switching Station to accommodate existing and potential solar developers.

PG&E would secure new rights for installation of the PG&E 500-kV Interconnections, PG&E 230-kV Interconnections, PG&E Panoche Substation Interconnection Modifications, and PG&E 12 kV distribution line by negotiating agreements with each landowner. No development restrictions or existing structures are located within the new easement locations. As described previously, PG&E may need to modify its existing easements to accommodate the PG&E 230-kV Reconductoring.

Under Section 35 of GO 95, the CPUC regulates all aspects of design, construction, and operation and maintenance of electrical distribution lines, including fire safety hazards, for utilities subject to its jurisdiction. The project would be

conducted in accordance with Section 35 of GO 95, which requires certain vegetation management activities be performed to establish necessary and reasonable clearances where overhead conductors traverse trees and vegetation (CPUC 2020). LSPGC and PG&E would seek to obtain easements that would allow for the removal of trees anywhere within the easement that could pose a threat to the lines or adjacent electrical infrastructure.

Temporary construction easements would be required for temporary construction areas (e.g., staging areas and pulling sites) and temporary access roads located outside the permanent easements that would be acquired by LSPGC and PG&E (Appendix A, Figures 1 through 18). All temporary construction areas that would support the construction of the proposed Manning Substation would be located on the parcel that LSPGC would acquire. All temporary easements would be secured by negotiating with landowners. Additional information about construction easements and temporary work areas is included in Section 2.8, “Project Construction”.

LSPGC would acquire approximately 40 acres of land through the purchase of a portion of a single privately owned approximately 160-acre parcel for construction, operation, and maintenance of the project. The approximately 120 acres that remain within this larger parcel would retain their agricultural use and would not be physically constrained as a result of the land transaction. In addition to the land purchase transaction, the project would require new easements for the new transmission lines and interconnections that are outside of existing ROWs (Appendix A). Lastly, PG&E would obtain rights for the small portion of the 230 kV Interconnection that would extend onto the substation site. New easements that would need to be secured are included in Table 2-4.

Table 2-4 New Land, Easements, and Right-of-Way for Project Components

Project Component	Length (miles)	Width (feet)	Area (acres)
Manning Substation	--	--	40
LSPGC 230 kV Transmission Line	11.5	100 to 120	158 to 189
PG&E 500 kV Interconnections	1.1	350 to 450	47 to 60
PG&E 230 kV Interconnections	4.5	240 to 300	125 to 156
PG&E 230 kV Reconductoring	7	0 to 75	0 to 64 ¹
PG&E Panoche Substation Interconnection Modifications	1.5	150	27
PG&E 12 kV Distribution Line	0.5	20	1.2

¹ Existing PG&E ROW would be widened.

Source: Adapted by Ascent in 2024.

2.8 PROJECT CONSTRUCTION

2.8.1 Construction Access

The project area would be accessed during construction using existing paved and unpaved roads, new permanent access roads, and temporary access roads (Appendix A). A summary of the proposed road work by type is provided in Table 2-5. An existing dirt road would be upgraded to provide access to the proposed Manning Substation; specifically, the turning radius at the intersection of Manning Avenue and the unnamed private road that continues south from the intersection of South Brannon Avenue and Manning Avenue would be widened on the southeast corner of the intersection to allow larger vehicles to safely turn onto the unnamed private road. In addition, the unnamed private road would be widened to approximately 20 feet from its intersection with Manning Avenue to the proposed substation driveway. PG&E would use its existing access roads, existing public roads, proposed temporary access roads or overland routes to access its facilities (Appendix A).

Where existing access is not available and surface conditions are suitable, approximately 16-foot-wide temporary access roads would be established during construction to access temporary construction areas (Appendix A). Grading and/or road base placement would not occur on the temporary access roads unless required for delivery of equipment. During winter months, PG&E may apply heavy duty interlocking panels or gravel on roads for access.

A new, approximately 500-foot-long, 20-foot-wide driveway would be constructed to connect the primary entrance of the Manning Substation to the adjacent existing unpaved road. The new driveway would be constructed starting at the existing unnamed, unpaved private road and traveling due west approximately 500 feet to the substation gate (Appendix A, Figure 5). This access road would be graded and rock would be installed.

Approximately 2,640 feet of new permanent dirt access roads would be constructed to connect existing PG&E operation and maintenance areas to the proposed LSPGC transmission structures to facilitate future operations and maintenance activities (Appendix A). These access roads would be approximately 20 feet wide.

No overland access routes are anticipated to be used for the LSPGC components of the project. PG&E may use overland access routes to access some of its existing facilities in order to minimize impacts when a temporary road is not warranted.

Table 2-5 Access Road Summary

Type of Road	Description	Total Length (miles)	Total Width (feet)	Total Area (acres)
Existing Dirt Roads	Dirt roads traversing agricultural areas primarily used for agricultural purposes.	21.8	12	31.7
Manning Substation Driveway	New gravel driveway to be installed to access the substation from an unnamed private road.	0.1	20	2
New Permanent Access Roads	New permanent roads to be installed to provide access for operation and maintenance activities.	0.5	20	1.2
Temporary Access Roads	Travel across primarily farmland to access structure locations.	15.5	16	30.1

Source: Modified by Ascent in 2024.

WATERCOURSE CROSSINGS

The project would be located primarily on existing agricultural land. Watercourses identified as potential waters of the State have been identified within the project alignment area. With the exception of the California Aqueduct, which would be spanned by the LSPGC 230-kV transmission line and PG&E 230-kV Reconductoring (see Figure 2-2), these watercourses would be avoided during construction and not crossed by any element of the proposed project.

HELICOPTER USE

One light-duty helicopter is anticipated to support construction of the LSPGC components. PG&E’s transmission line work would also utilize one or two helicopters for the proposed PG&E 500 kV Interconnections, two helicopters for the proposed PG&E 230 kV Interconnections, two helicopters for the proposed PG&E 230 kV Reconductoring, and one helicopter for the proposed PG&E 230-kV and 115-kV structure raises. All helicopters would be Hughes 500, Bell 429, MD 600 N, or similar models. Helicopter activities may include transportation of construction workers, delivery of equipment and materials to temporary construction areas, hardware installation, and/or installation of overhead conductor/cable.

Helicopter takeoff and landing areas would be located within or adjacent to each pulling site and staging area (Appendix A, Figures 1 and 16). Each landing zone would be approximately 200 feet by 200 feet. In addition, local public and/or private airports or airstrips may be used to support helicopter operations. Airports within 20 miles of the project alignment that could be used for project-related helicopter operations are the San Joaquin Airport and Firebaugh Airport. Other airports that could be used include the private Stone Airstrip, located approximately 43 miles southeast of the project site near the City of Lemoore, and the Harris Ranch Airport, located approximately 28 miles southeast of the project alignment near the City of Coalinga. Helicopter refueling would typically occur off-site at local airports or airstrips; however, refueling at staging areas may also occur.

Helicopter crews would coordinate flightpaths from local airports or airstrips with local air traffic control, as appropriate. Once in the vicinity of the project, helicopter flightpaths would generally follow the project alignment.

The anticipated hours and duration of helicopter operations are provided in Appendix B. Helicopter Safety Plans would be prepared and, if required, a Congested Area Plan pursuant to Title 14, 133.33(d) of the Code of Federal Regulations (CFR) and Title 77 of the CFR would be developed in coordination with the Federal Aviation Administration (FAA) Flight Standards District Office in Fresno, which has jurisdiction over the project area.

2.8.2 Staging Areas

A total of four staging areas are proposed to support transmission line and substation construction. Table 2-6 provides a summary of each of the four staging areas. The substation site would also be used as a staging area. All staging areas are shown in Appendix A, Figures 3, 10, 11, 15, 16, and 18.

PG&E would utilize temporary work areas for short-term laydown of construction materials and equipment as shown in Appendix A. PG&E would also utilize the Manning Substation staging area for long-term construction staging needs for transmission line work near the Manning Substation. In addition to the staging area located adjacent to the Manning Substation, PG&E would utilize their existing properties as staging areas for work associated with these locations. Existing PG&E properties to be used as staging areas include Tranquillity and Las Aguilas switching stations and Panoche, Los Banos, Gates, and Midway substation properties.

Table 2-6 Staging Area Summary

Name	Location	Condition	Size (acres)
Dinuba Avenue	Approximately 1,000 feet north of the intersection of West Dinuba Avenue between South Washoe Avenue and South San Diego Avenue	Active Agriculture	50
Manning Substation	Approximately 1,000 feet south of the intersection of West Manning Avenue and an unnamed private road	Inactive Agriculture	40
Panoche Junction	Northeast of the intersection of West Dinuba Avenue and South Jerrod Avenue	Active Agriculture	78
San Diego Avenue	Approximately 1,000 feet north of the intersection of West Dinuba Avenue and South San Diego Avenue	Inactive Agriculture	50
Washoe Avenue	Approximately 1,000 feet north of the intersection of West Dinuba Avenue and South Washoe Avenue	Active Agriculture	50
Tranquillity Switching Station	Approximately 1,350 feet north of the intersection of South Dinuba Avenue and South Ohio Street	Disturbed/Developed	1.4
Manning Avenue	Adjacent to the intersection of Manning Avenue and Interstate 5	Disturbed/Developed	4
Total	--	--	273.4

Source: Adapted by Ascent in 2024.

STAGING AREA PREPARATION

Staging area preparation would involve clearing, topsoil salvage, grubbing, and limited grading. Gravel may be used to line the ground at the staging areas to avoid the creation of unsafe surface conditions and limit unnecessary sediment transport off-site. Prior to the application of the gravel, fabric would be laid on the ground at each staging area to facilitate greater ease of removal during decommissioning of the staging areas. If necessary, staging area access would be established between the staging area and existing roads if access does not exist.

Staging areas may be used as a refueling area for vehicles and construction equipment; as an equipment wash station; for assemblage; for storage of material and equipment, storage containers, construction trailers, and portable restrooms; and for parking and lighting. Some substation equipment (e.g., transmission line structures, hardware, disconnect switches, instrument transformers, take-off towers, insulators, conductors, bus, connectors, conduit, cable trench, rebar) would be received and temporarily stored at the staging area prior to installation.

Construction workers would typically meet at the staging area each morning to park their vehicles. All construction equipment and vehicles would be parked within the staging area while inactive and at the completion of each workday, where and when practical.

Perimeter security fencing, typically consisting of an approximately 10-foot-tall chain-link-style fence topped with approximately 1 foot of barbed wire, may be used to establish secure areas within the equipment staging areas. This fencing would be used to secure expensive equipment and would be locked nightly. Temporary lighting may be installed as a security measure. Another style of perimeter fencing, typically consisting of 4-foot-tall plastic orange security fencing, may be utilized to denote the extent of staging areas and work areas.

2.8.3 Work Disturbance Areas

The project would result in temporary and permanent impacts during construction. Table 2-7 includes the proposed work disturbance type and size for each construction component. The locations of temporary and permanent disturbance areas are shown in Appendix A.

Table 2-7 Work Disturbance Areas

Construction Work Area Type	Disturbance Type	Dimensions (feet)	Quantity	Disturbance Area (acres)
New access road	Permanent	20 feet wide	6	0.8
Road widening/improvements	Permanent	20 by 6,737	1	3.1
Temporary access road	Temporary	16 feet wide	57	13.7
Staging area	Temporary	1,275 by 1,680	4	207.8
Structure work area	Permanent	65 by 20 (500 kV), 20-foot diameter (230 kV)	264	1.8
	Temporary	200 by 200 (500 kV), 120 by 200 (230 kV), 40 by 40 (distribution)	208	99.3
Pulling site	Temporary	500 by 280 (500 kV), 600 by 100 (230 kV)	58	91.2
Guard structure	Temporary	120 by 25	12	0.8
Manning substation	Permanent	840 by 840	1	16.1
	Temporary	1,140 by 1,560	1	21.6
Landing zone ¹	Temporary	200 by 200 (500 kV), 350 by 350 (230 kV)	2	0.9

Notes: The approximately 200 by 200-foot helicopter landing zones would be included within the staging areas and select pulling sites. The proposed PG&E 500 kV transposition structures are not included in this table as work area locations have not been finalized.

Source: Adapted by Ascent in 2024.

2.8.4 Temporary and Backup Power

For temporary power, LSPGC would tap into a nearby existing overhead distribution system. PG&E would install the proposed PG&E 12 kV distribution line on approximately nine wood poles to provide power to the proposed substation site and associated staging area during construction. If distribution power is not available in a timely manner, temporary generators would be used as a contingency for power during construction. The proposed distribution line supporting the Manning Substation would also serve the facility during operation and maintenance as a backup power source.

2.8.5 Site Preparation

SURVEYING AND STAKING

The centerline of the ROW would be surveyed and marked 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. Biological, cultural, paleontological, and hydrological resources would be clearly marked to restrict construction activities and equipment from entering these areas as required by applicant-proposed measures (APMs), construction measures, or mitigation measures.

UTILITIES

Prior to initiating construction in any given area, LSPGC and/or PG&E would notify all utility companies with utilities located within or crossing the project right-of-way to locate and mark existing underground utilities along the entire length of the project current construction area. No subsurface work would 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 would 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, LSPGC or PG&E would submit the planned construction method to the owner of the third-party utility for review and approval at least 30 days prior to construction.

VEGETATION CLEARING

Vegetation would be trimmed or removed as needed within construction work areas to facilitate safe access and construction, as well as reduce the potential for fire. Only the minimum amount of vegetation would be removed.

Vegetation would be removed using mechanized equipment or by hand using chain saws or other hand-held equipment. Following initial clearing, topsoil would be salvaged where appropriate to a depth of 6 inches, or to actual depth if shallower, for on-site storage and use in site restoration. Salvaged topsoil material would be kept on site in the immediate vicinity of temporary disturbance areas or at a nearby approved work area or staging area to be used in restoration of temporarily disturbed areas as appropriate. The areas of temporary and permanent disturbance impacts, organized by vegetation community, are included in Table 2-8.

Table 2-8 Impacts on Vegetation Communities

Vegetation Community of Land Cover Type	Temporary LSPGC Project Component Impacts (acres)	Permanent LSPGC Project Component Impacts (acres)	Temporary PG&E Project Component Impacts (acres)	Permanent PG&E Project Component Impacts (acres)	Temporary Shared PG&E and LSPGC Project Component Impacts (acres)	Permanent Shared PG&E and LSPGC Project Component Impacts (acres)	Temporary Total Impacts (acres)	Permanent Total Impacts (acres)
Active Agriculture	159.0	0.18	23.4	0.2	0.02	0	182.4	0.4
Annual Grassland ¹	0	0	33.3	0.2	0	0	33.3	0.2
Developed	0.3	0	0.7	0	0	0	1	0
Disturbed	5.5	1.2	31.9	0.6	25.2	13.1	62.6	14.9
TBD ²	32.4	2.4	68.5	1.1	59.1	0	160	3.5
Total³	192.2	3.8	157.8	2.1	84.3	13.1	439.3	19.0

¹ *Amsinkia (menziesii, tessellate)*, *Phacelia* spp. Herbaceous Alliance, and *Avena* spp. (*Bromus* spp., Herbaceous).

² Area was not surveyed due to lack of permission from private property owners. Follow-up surveys would be conducted pending landowner approval for survey access.

³ Totals may not sum due to rounding.

Source: LSPGC 2024.

TREE TRIMMING AND REMOVAL

Tree trimming would be conducted prior to and during project construction where necessary to facilitate access to existing facilities and the work areas for proposed facilities being installed. Tree removal would occur in and around each new structure to be installed where trees currently exist. In addition, tree removal would occur to establish a permanent access road in orchards where trees are too close together for trimming to provide appropriate access. Only orchard trees would be removed as part of project construction. No other trees would be removed or trimmed as part of the project. Trees would generally be cleared within a 100-foot by 100-foot area at each structure location, and the majority of the cleared area would be revegetated after construction. The total area of tree clearing is anticipated to be approximately 6.8 acres.

WORK AREA STABILIZATION

Work areas would be stabilized using best management practices (BMPs) described in the storm water pollution prevention plans (SWPPPs) prepared for the LSPGC and PG&E project components. The SWPPP’s BMPs would remain in place and would be maintained until new vegetation is established, as defined in the SWPPPs. Typical BMPs that would be used for work area stabilization are presented in Section 2.8.13, “Dust, Erosion, and Runoff Controls”. Due to the relatively flat terrain across the project footprint, no slope stabilization issues are anticipated.

GRADING

Staging areas and construction work areas are located in generally flat areas; however, grading and/or vegetation removal would occur as necessary to provide a safe area for construction. If required, sites would be graded to maintain the direction of the natural drainage and would be designed to prevent ponding and erosion.

The substation site would require more substantial grading than other project areas owing to the inclusion of grading the proposed access road and staging area discussed in Sections 2.6.1 and 2.8.1, respectively. Generally, grading and excavation would be accomplished in a phased approach and would be completed such that the site meets the project design specifications and matches proposed grades. During earthwork, soils and other surficial deposits that do not possess sufficient strength and stability to support structures would be removed from the site.

As needed, graded material would be processed on site until the size of the soil materials could be used for fill. In addition to general earthmoving quantities, 4 to 8 inches of surface gravel would be imported from a suitable nearby aggregate source and installed within the Manning Substation footprint for grounding purposes. All clean spoils excavated for the project would be used on site, as needed. All spoils that are not useable and/or are contaminated would be sent to a properly licensed landfill facility. Table 2-9 includes the anticipated grading and import/export requirements at the Manning Substation.

Table 2-9 Manning Substation Grading Volumes

Grading Type	Estimated Volume (cubic yards)
Total Cut (Topsoil + Net Cut)	32,000
Total Fill (select import and net fill)	37,300
Total Export/Wasted	8,300
Total Import (select import/structural fill)	13,600

Source: Adapted by Ascent in 2024.

2.8.6 Transmission Line Construction

After the site preparation work is completed, new transmission structures (LSTs and TSPs) would be installed and some existing LSTs and TSPs would be removed. Wood poles would be installed for the distribution line. The approximate average depth and diameter of excavation for each structure is summarized in Appendix B.

TRANSMISSION STRUCTURE REMOVAL

The proposed PG&E 500 kV Interconnections, PG&E 230 kV Interconnections, PG&E 230 kV Reconductoring, and PG&E 230 kV and 115 kV structure raises would require the removal of existing LSTs. One or more cranes would be rigged to the top of each tower and the legs would be cut off just above or at the foundations. Helicopters may be used to remove existing structures. The tower would then be lowered to the ground, where it would be crushed and/or dismantled prior to being transported off-site by flatbed trucks. The removed towers would be transported to a staging area for further disassembly prior to being recycled or disposed of at a facility approved by the California Department of Resources Recycling and Recovery to dispose of tower materials.

In some cases, foundations may be removed to grade level when in sensitive habitat. Following tower removal, each foundation would be removed to a depth of 2 to 3 feet below grade, dependent on the type of structure (see Appendix B for approximate average excavation depth and width). The existing concrete would be broken using an excavator with a breaker attachment, and existing rebar would be cut using appropriate tools. Following foundation removal, the void would be backfilled using either native spoils previously excavated from the vicinity or imported fill. Excess removed material may be stored temporarily at work sites and ultimately loaded into dump trucks for disposal or recycling at a facility approved by the California Department of Resources Recycling and Recovery to dispose of removed concrete.

TRANSMISSION STRUCTURE INSTALLATION

Direct-Bury Poles

Some TSPs and wood poles would be installed via a direct-bury method along the proposed LSPGC 230 kV transmission line, PG&E Panoche Substation Interconnection Modifications, and PG&E 12 kV distribution line. Each pole would require a hole to be excavated using an auger, backhoe, or hydraulic or pneumatic equipment (e.g., jackhammers or drills). In some locations, steel casing may be placed to stabilize the excavation walls prior to installation of the pole.

Following excavation of each hole, the pole would be placed in the hole, typically by a crane or a line truck with an attached boom. The pole base would be secured by backfilling with the excavated material, gravel, controlled low-strength material, or concrete in the interstitial space between the wall of the hole and the pole. In some locations, guy wires would be required to provide additional support to the pole. The guy wire would be attached to the pole, and anchors would be used to secure the guy wire to the ground. Material excavated for foundation construction would be trucked off-site or spread across the surrounding area within the ROW.

Pier Foundation-Mounted Poles

Some TSPs, including along the proposed LSPGC 230 kV transmission line, PG&E 230 kV and 500 kV Interconnections, and PG&E 230 kV Reconductoring, would be installed on concrete pier foundations. Additionally, the proposed PG&E 230 kV and 115 kV structure raises, structures for the PG&E Panoche Substation Interconnection Modifications, and PG&E 500 kV transposition structures would require the installation of TSPs on concrete pier foundations. Foundation construction would begin by using augers on excavator mounted drilling equipment to complete the required excavations and, if necessary, a reinforcing steel rebar cage would then be lowered into the excavation. A temporary form extending approximately 2 feet above grade would then be constructed, and a concrete truck would be used to pour concrete and fill the excavation. Each completed foundation would be left to cure for approximately 28 days and then the form would be removed. The approximate average depth and diameter of excavation, approximate volume of soil to be excavated, and approximate volume of concrete or other backfill required are summarized in Appendix B. Material excavated for foundation construction would be trucked off-site or spread across the surrounding area within the ROW.

After the foundation is cured, TSPs would be delivered to the temporary construction area using a flatbed truck. Cranes would be used to lift and place the proposed poles/pole segments onto the foundation. Cranes and/or bucket trucks would also lift workers into elevated positions to attach pole crossarms and other hardware onto the assembled pole. Helicopters may be used instead of cranes.

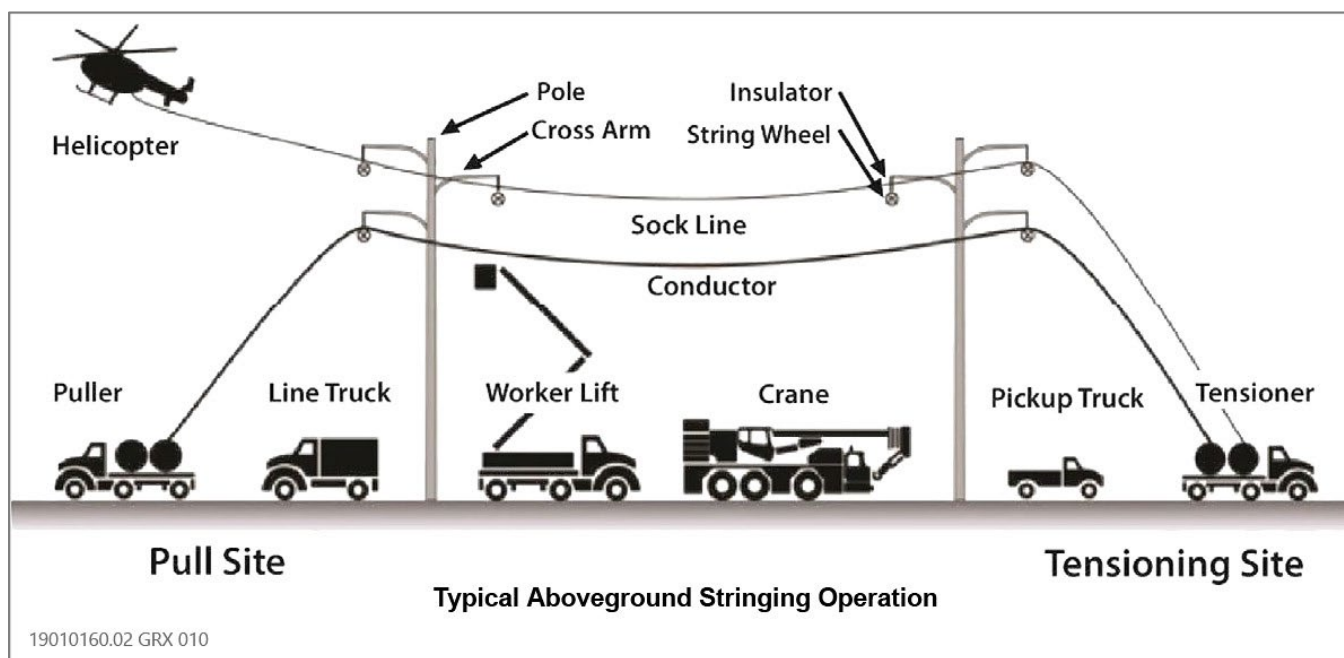
Lattice Steel Towers

LSTs are the structure type proposed for the PG&E 500 kV Interconnections. Each LST would be installed atop up to four concrete pier foundations. Each pier foundation would be constructed using similar methods as those used for the TSP foundations described in the previous subsection.

After the concrete foundations cure, assembled segments of each LST would be delivered to the temporary construction area using a flatbed truck. Cranes would then move each LST segment into place, and construction crew members would use aerial lift trucks to access the tower and attach the segments using hardware. Helicopters may be used instead of cranes.

ABOVEGROUND AND UNDERGROUND CONDUCTOR/CABLE

Aboveground conductor/cable installation and removal (i.e., wire stringing) activities would be conducted following the methods detailed in the Institute of Electrical and Electronics Engineers Standards Association Standard 524-2016, Guide to the Installation of Overhead Transmission Line Conductors (Institute of Electrical and Electronics Engineers 1980). Figure 2-9 shows a typical drawing of aboveground and belowground conductor/cable stringing operations. Safety devices (e.g., traveling grounds, guard structures, or radio-equipped construction crews) would be in place prior to the initiation of wire-stringing activities.



Source: Image prepared and provided by LSPGC in 2024; adapted by Ascent in 2024.

Figure 2-9 Above and Below Ground Conductor/Cable Stringing Operations

Wire stringing includes all activities associated with the installation of the conductors onto transmission line structures. These activities include the installation of conductor, optical ground wire (where applicable), insulators, stringing sheaves (rollers or travelers), vibration dampers, suspension weights, and dead-end hardware assemblies for the entire length of the route. The following steps describe the typical wire-stringing activities that would be used for this project:

- ▶ **Sock Line Threading.** Using a bucket truck, a lightweight sock line is threaded through wire rollers attached to each structure and is secured using a camlock device. For reconductoring, the existing line may be used in place of a sock line. Alternatively, helicopters may be used to fly the sock line from structure to structure.
- ▶ **Pulling.** The sock line or existing conductor would be used to pull in the conductor pulling rope and/or cable. The pulling rope and/or cable would be attached to the new conductor using a special swivel joint to prevent damage to the wire and to allow the wire to rotate freely to prevent complications from twisting as the conductor unwinds off the reel. The new conductor would be installed (pulled in) by pulling the pulling rope or cable using conductor tensioning equipment at the pulling site.
- ▶ **Splicing, Sagging, and Dead-Ending.** After the conductor is pulled in, any necessary mid-span splicing would be performed. The conductor would then be sagged to proper tension and dead-ended (attached) to structures.
- ▶ **Clipping In.** After the conductor is dead-ended, the conductors would be secured to all tangent structures in a process called "clipping in." Once this is complete, spacers would be attached between the conductors of each phase to prevent conductors from making contact with each other and causing damage to the conductor.

Conductor installation and removal activities would be performed at the pulling sites and structure work areas shown in Appendix A. Pull sites along the 230 kV transmission facilities would typically be 600 feet by 100 feet and spaced approximately 9,000 feet apart, while pull sites along the 500 kV transmission facilities would typically be 500 feet by 280 feet and spaced approximately 4,200 feet apart. The locations of proposed guard structures, which would be placed to protect traffic and other facilities during pulling activities, are shown in Appendix A, Figures 6 and 7. If needed, conductor splicing would be performed using compression splices applied in accordance with manufacturer recommendations. Anchor poles may be temporarily installed for use in pulling sites during conductor installation.

TELECOMMUNICATIONS

Optical ground wire would be installed along the proposed LSPGC 230 kV transmission line and PG&E 230 kV Interconnections. The proposed PG&E 230 kV Reconductoring would reuse the existing optical ground wire. The methods for optical ground wire installation would be similar to those for the transmission conductors as described in Section 2.8.8, "Aboveground and Underground Conductor/Cable". A small enclosure within the northeast corner of the proposed Manning Substation would contain telecommunication equipment for PG&E.

GUARD STRUCTURES

Guard structures are temporary facilities that would be installed at transportation and utility crossings prior to conductor installation/removal. They are designed to prevent the conductor from making contact with the facility it is guarding should it drop below the anticipated stringing height. Guard structures would be installed at 12 locations along the project alignment (Appendix A, Figures 6 and 7). Equipped boom trucks would serve as guard structures, or, at highway crossings, temporary netting held by wood poles would be installed if required by the permitting authority (i.e., California Department of Transportation (Caltrans)).

Where the use of boom trucks is not feasible, guard structure wood poles would be installed. These structures would be standard wood poles with diameters of 12 to 18 inches at the base and burial depths of 5 to 7 feet. Depending on the overall spacing of the conductors being installed, three to five guard structure wood poles would be required on either side of a crossing. Guard structure wood poles would be installed using a direct-bury method. Direct-buried wood poles would require a hole to be excavated using either an auger or a backhoe, or hydraulic or pneumatic equipment (e.g., jackhammers, drills). In some locations, corrugated steel or plastic forms may be placed to stabilize the excavation walls prior to installation of the pole.

Following excavation of the hole, the wood pole would then be installed in the excavated or augered holes, typically by a line truck with an attached boom; the base would be secured by backfilling with the excavated material the interstitial space between the wall of the hole and the pole.

2.8.7 Substation Construction

Construction of the proposed Manning Substation would begin with preparation and grading of the substation site, followed by installation of foundations and underground equipment, and then installation and testing of electrical equipment. Prior to clearing and grubbing, all necessary surveys, marking, and installation of storm water 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 typically 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 is completed, major equipment and structures would be installed and anchored to their respective foundations. All major electrical and substation equipment (e.g., power transformers, reactors, power circuit breakers, control enclosure and reactors) would be delivered to the substation footprint and placed directly on the foundations. Other substation equipment (e.g., air disconnect switches, instrument transformers, transmission structures, insulators, conductors, rigid bus, connectors, conduit, cable trench, rebar) would be received and temporarily stored at the staging area prior to installation. Transmission interconnection line terminations and distribution connections would be completed inside the Manning Substation facility following final installation of the substation structures and equipment.

The Manning Substation would be accessed using a new driveway extending from an unnamed private road. The gravel driveway would be approximately 20 feet wide and approximately 500 feet long. The gravel substation internal access roads would be maintained for safe access for substation operation and maintenance activities.

Civil work at the substation site would include grading and the installation of a stormwater management system. The graded area would be used for the construction of the substation, as well as staging, spoil or import storage, drainage, and the substation driveway and parking areas. Prior to grading, the substation site would be cleared of all vegetation. The proposed slope of the substation would be at a minimum of 1 percent from the east to west.

A proposed detention basin would be installed at the northeast corner of the substation site, as shown in Figure 2-4. The basin would measure approximately 3 feet deep, 50 feet wide, and 200 feet long. In total, approximately 1,200 cubic yards of material would be excavated to prepare the basin, which would be constructed using an excavator and compaction machinery to provide the compacted soil detention basin base.

2.8.8 Traffic Control

No existing sidewalks, trails, paths, or driveways would be used or blocked during project construction. Traffic control procedures would be implemented intermittently (i.e., when needed if cars are present) along Manning Avenue and the unnamed private road that would be used to access the substation site during construction and times of large deliveries. These restrictions would be temporary, and detours would not be necessary. Access would be granted through the area as needed. Flaggers or other traffic control measures would be used to guide traffic around project work areas in a safe manner. Temporary lane closures may be required during construction of the facilities. The temporary closures would be coordinated with Fresno County and emergency service providers through the encroachment permit process, and a traffic control plan would be developed and implemented as necessary.

The transmission line crossings of I-5 would require rolling traffic stops during conductor stringing, which is expected to last up to 7 days. At rolling traffic stops, traffic would be held for a few minutes while each conductor is pulled across the freeway. LSPGC and PG&E would secure encroachment permits as required from Fresno County and Caltrans and implement the associated required traffic control plans prior to implementing lane closures and rolling traffic stops.

2.8.9 Dust, Erosion, and Runoff Controls

DUST

During construction, migration of dust from the construction sites would be limited by control measures set forth by LSPGC's APMs and PG&E's construction measures (CMs) outlined in Sections 2.12 and 2.13. These measures may include the use of water trucks and other dust control measures, including the application of non-toxic soil binders. In addition, LSPGC would prepare a Dust Control Plan (Rule 8120) that would be reviewed and approved by the San Joaquin Valley Air Pollution Control District. 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 project alignment.

EROSION

LSPGC would obtain and comply with the Construction Stormwater General Permit Order 2022-0057-DWQ and implement the measures identified in the required SWPPP to effectively control erosion and minimize any associated impacts.

RUNOFF

The Manning Substation pad would be graded to drain storm water to a perimeter drainage system that would help facilitate drainage to a substation detention basin to be installed as part of the project. The detention basin would be installed on the northeast corner of the proposed substation site to facilitate the return of water captured on site to the groundwater basin. All storm water runoff from the project would filter through the surrounding soil into the groundwater basin or evaporate.

2.8.10 Water Use and Dewatering

Water used for construction activities (e.g., for dust suppression and compaction requirements) would be trucked in from Westlands Water District or other sources, including private sources that have sufficient supply available for construction. The project would utilize recycled or reclaimed water, if available. Approximately 20 million gallons of water are estimated to be needed for dust control, compaction, and concrete work for the LSPGC and PG&E project components. Construction crews would be responsible for providing their own drinking water during construction.

In instances where groundwater is encountered, excavations would be dewatered using one or more pumps and the water would be either discharged on site to the surface, if permitted, or stored in Baker tanks or similar equipment within staging areas prior to disposal off-site. Baker tanks or similar equipment would be emplaced on the temporary work area established for new structure installation. Dewatered water may also be used for dust control. In all cases, water discharges would be conducted in accordance with all applicable federal and state regulations.

2.8.11 Hazardous Materials and Management

Prior to construction, a hazardous materials management plan (HMMP) would be prepared describing hazardous materials use, transport, storage, management, and disposal protocols. The HMMP would be prepared in accordance with relevant state and federal guidelines and regulations (e.g., California Division of Occupational Safety and Health [Cal/OSHA]). The HMMP would be prepared by LSPGC and PG&E as part of a condition of the project and submitted to the CPUC for review and approval prior to any construction activities. The HMMP would include the following information related to hazardous materials and waste as applicable:

- ▶ a list of hazardous materials present on site during construction and operation and maintenance to be updated as needed along with other information regarding storage, application, transportation, and disposal requirements;
- ▶ a hazardous materials communication plan;
- ▶ assignments and responsibilities of project health and safety roles;
- ▶ standards for any secondary containment and countermeasures that would be required for hazardous materials; and
- ▶ spill response procedures based on project and quantity.

The procedures would include the materials to be used, location(s) of such materials within the project area, and disposal protocols, as well as 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 a Cal/OSHA-trained individual, and testing at a certified laboratory.

2.8.12 Waste Generation and Management

SOLID WASTE

Solid wastes generated during construction would primarily be non-hazardous wastes, including metal, paper, and plastic packaging. Construction debris volumes for all project components are estimated at a total of 2,750 cubic yards. Earthwork associated with the project would require cut and fill, and a balanced cut-and-fill approach (i.e., using the cut materials to fill other portions of the project) is planned to minimize excess fill material after the completion of grading. If possible, recyclable construction material would be transported to a recycling facility approved by the California Department of Resources Recycling and Recovery, such as American Avenue Landfill or Mid Valley Disposal's (MVD's) Kerman Materials Recovery Facility (MRF) & Transfer Station. Construction waste that cannot be recycled would ultimately be disposed of at the American Avenue Landfill and/or MVD's Kerman MRF & Transfer Station. Construction waste would be disposed of in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste.

LIQUID WASTE

Liquid waste streams anticipated for the project primarily include sanitary waste and storm water runoff. Sanitary waste from self-contained portable toilets would be routinely pumped as needed and would be taken by Knight's Site Services and/or United Site Services to a proper sanitary waste facility for disposal. The sanitary waste that would be generated is estimated at 100 to 150 gallons per week per every 10 workers on site. Sanitary waste would be transported by the licensed sanitary waste service providers for off-site disposal at their contracted treatment, storage, and disposal facility.

Storm water runoff would be managed according to a SWPPP prepared to comply with the Construction Stormwater General Permit Order 2022-0057-DWQ and approved by the Central Valley Regional Water Quality Control Board. While groundwater is not anticipated to be encountered, excavation dewatering effluent may be produced. This effluent would be filtered and managed according to the dewatering plan developed as part of the SWPPP.

HAZARDOUS WASTE

Project construction would require the limited use of hazardous materials (e.g., 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 potentially hazardous waste sources during construction

include contaminated soils, incidental spill waste, and concrete washout. Waste generated or encountered would be handled, contained, and disposed of according to local, state, and federal regulations. In addition, prior to construction, an HMMP would be prepared describing hazardous materials use, transport, storage, management, and disposal protocols. This could include containerization in Caltrans-approved vessels, use of secondary containment, and/or training of material handlers to ensure worker safety and the reduction of cross contamination. Operational hazardous waste would include lead-acid batteries from the Manning Substation.

2.8.13 Fire Prevention

During construction activities throughout the project alignment that are considered "hot work" (e.g., welding, grinding, or any other activity that creates hot sparks), a 10-foot buffer around that activity would be implemented, and vegetation would be cleared within the 10-foot buffer to ensure sparks do not create a fire ignition hazard. For activities that do not produce sparks but still have potential to produce a fire hazard, such as ground rod or ground wire installation, a 5-foot buffer would be cleared of vegetation to reduce fire ignition risk.

Under Section 35 of GO 95, the CPUC regulates all aspects of design, construction, and operation and maintenance of electrical distribution lines and fire safety hazards for utilities subject to its jurisdiction. 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. LSPGC would create a fire break around the Manning Substation in accordance with all applicable state and federal regulations.

2.8.14 Construction Workforce, Equipment, Traffic, and Schedule

Construction of the project facilities would occur simultaneously. The peak employment is assumed to be approximately 140 workers per day, but on average, the workforce on site would be less. Peak total vehicle round trips during the construction period would be approximately 344 per day, consisting of approximately 64 truck trips and 280 automobile trips. Additionally, workers would commute to the project alignment from adjacent rural areas utilizing options, such as vanpools and carpools, reducing their reliance on single occupancy vehicles. The equipment that would be used to construct each project component, along with its approximate duration of use, is provided in Appendix B.

Construction vehicles and equipment would typically access the project site from Manning Avenue. Although some disruption to traffic flow may occur on Manning Road when trucks ingress or egress from the access road, such events would be periodic and temporary. Signage and/or flagmen would be used to reduce potential disruptions to traffic flow and to maintain public safety during construction. Parking of worker vehicles would occur within the LSPGC-owned parcel on which the Manning Substation would be constructed and the staging areas identified in Appendix A.

The peak vehicle trips would be from approximately May 2026 through December 2027 during the earthwork and grading of the project site (e.g., site development and below-grade construction activities) due to the removal or importation of fill. The estimated total daily average vehicle miles traveled (VMT) during the 27-month construction period would be approximately 7,819 miles. Total vehicle round trips during this construction period would be approximately 143 per day, consisting of approximately 64 daily truck trips and 280 automobile trips.

Construction of the project is anticipated to take approximately 27 months to complete, depending upon unforeseen and unpredictable factors such as weather. Seasonal restrictions are not anticipated. Construction is scheduled to begin in April 2026 through July 2028, including surveying and site restoration. Although the in-service date is planned for June 1, 2028, activities through July could include site restoration and demobilization. The construction schedule is presented in Table 2-10.

Table 2-10 Proposed Project Construction Schedule

Project Component	Start Date	End Date
Site Survey	April 2026	May 2026
Manning Substation	May 2026	October 2027
PG&E Tranquillity Switching Station Modification	May 2026	April 2027
PG&E Substation Modifications	February 2027	May 2027
PG&E 230-kV Reconductoring	May 2026	March 2027
LSPGC 230-kV Transmission Line	May 2026	November 2027
PG&E 500-kV Interconnections	June 2027	September 2027
PG&E 230-kV Interconnections	June 2027	September 2027
PG&E 230-kV/115-kV Structure Raises	May 2026	July 2027
PG&E Panoche Substation Interconnection Modifications	May 2026	February 2027
Commissioning and Testing	October 2027	June 2028
Demobilization and Site Restoration	February 2028	July 2028

Notes: The proposed PG&E 500 kV Transposition Structures and PG&E's proposed modifications at the Las Aguilas Switching Station are not included in the construction schedule. Details on the timeline for the components and modifications are pending development by PG&E.

Source: Modified by Ascent in 2024.

WORK SCHEDULE

Construction activities for the project would generally be scheduled to occur during the hours of 7:00 a.m. to 7:00 p.m. from Monday through Saturday. Night work is not anticipated to be necessary, but could be required in limited circumstances, such as interstate crossings and clearance restrictions. Construction activities could infrequently be scheduled outside of these hours to avoid or reduce schedule delays, complete construction activities (e.g., continuous concrete pours), accommodate the schedule for system outages, or address emergencies. While work would occur on an almost continuous basis at the substation site, work at the individual structure locations would be shorter in duration and more periodic in nature.

2.9 POST CONSTRUCTION

2.9.1 Configuring (Commissioning) and Testing

Configuring and testing would begin with pre-commissioning activities that include equipment fit-up inspections and simple electrical tests to ensure the equipment is connected properly. After pre-commissioning, the first commissioning activities would include transformer energization followed by auxiliary electrical tests. Lastly, the power electronic devices and protection/control system would be tested and programmed pursuant to the project requirements. After this, the project would be ready for energization.

Configuring and testing would require the use of pickup trucks, forklifts, and manlifts and would require approximately 24 construction personnel to be on site. Configuring and testing of the project would take approximately 9 months between October 2027 and June 2028, at which point the project would be fully functional and ready for commercial operation.

2.9.2 Demobilization and Site Restoration

Following 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.

All areas temporarily disturbed by project activities would be restored to approximate pre-construction conditions, as otherwise provided by new or existing easements, or in response to landowner requests. All areas would be carefully assessed to be sure all residual construction debris and waste is removed and transported off-site to an approved disposal facility. Any project waste materials that are routinely recycled would be recycled in an appropriate fashion at a California Department of Resources Recycling and Recovery approved disposal facility. LSPGC and PG&E would conduct a final inspection to ensure that cleanup activities are successfully completed as required. Areas that are disturbed by grading, augering, or equipment movement would be restored to their original contours and drainage patterns unless otherwise directed by the landowner. Work areas would be decompacted, and salvaged topsoil materials would be re-spread following recontouring to aid in restoration of temporarily disturbed areas. Revegetation activities would be conducted in accordance with the SWPPPs prepared for the LSPGC and PG&E project components, LSPGC's APMs, and PG&E's CMs. 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 project SWPPPs, APMs, and CMs. Gravel placed to facilitate construction may be left in place if requested by landowners.

2.10 OPERATION AND MAINTENANCE

Operation and maintenance of the project would be conducted in accordance with all applicable Federal Energy Regulatory Commission, NERC, CPUC, or CAISO requirements. Any operation and maintenance work (e.g., high-voltage capital repair or replacement) would also be conducted in accordance with the National Electrical Safety Code, Cal/OSHA requirements, and other applicable regulations and standards. Both LSPGC and PG&E have developed wildfire mitigation plans that describe how they would construct, maintain, and operate the electrical equipment to keep customers and communities safe by minimizing wildfire risk.

2.10.1 System Controls and Operation Staff

LSPGC FACILITIES

The project would be unstaffed during operation and maintenance. The proposed Manning Substation would be operated by LSPGC's 24-hour control center in Austin, Texas. Day-to-day operation of the substation would be conducted by LSPGC's asset management teams based in Texas and Missouri. The substation would also be monitored by CAISO's control center in Folsom, California, and CAISO would have operational control of the facility with authority to direct LSPGC's control center.

LSPGC's local maintenance/technical staff and existing LSPGC staff and outside resources would respond to maintenance issues and emergency situations. LSPGC currently has eight staff in its transmission maintenance group with an average experience of over 15 years. In addition, locally based field employees would support maintenance of the facilities. No additional staff is expected to be hired to support operation and maintenance of the project.

PG&E FACILITIES

PG&E's facilities would continue to be unstaffed during operation and monitored remotely. PG&E's local maintenance/technical staff and outside resources would respond to maintenance issues and emergency situations. No additional staff would be hired to support operation and maintenance of the project.

2.10.2 Inspection and Maintenance Programs for Substations and Switching Stations

LSPGC would regularly inspect, maintain, and repair the project substation facilities and access roads following completion of project construction. PG&E would continue its regular inspections at its existing substations and the Tranquillity Switching Station. Typical operation and maintenance activities would involve routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service.

In general, quarterly inspections would be performed on the Manning Substation, as well as PG&E's existing substations and switching stations to inspect each required piece of equipment in accordance with manufacturer recommendations. These inspections would be performed without taking the substation out of service. It is anticipated that equipment located at the Manning Substation facility would be taken out of service periodically to perform more extensive checks and maintenance on the main components of the facility. Due to the diversity of equipment and the individual system components, a small, specialized team would be utilized to perform more extensive maintenance activities.

LSPGC and PG&E would normally perform routine ground inspections of substation and switching station facilities quarterly using the access roads that were constructed for this purpose. Routine maintenance of the LSPGC 230 kV transmission line is expected to require approximately one trip per year by crews composed of one to four people. Annual comprehensive checks and maintenance would be performed by LSPGC maintenance personnel or qualified contractors.

PG&E transmission lines would be inspected annually by PG&E routine patrols, either from the ground or by a drone/helicopter. The inspection process would involve routine patrols from existing local staff either on the ground or by helicopter tasked with patrolling the transmission lines. Normal inspection and patrols would typically be completed in a pickup truck and/or an off-road utility vehicle. While not expected, if vehicle access is not available, an inspector would complete portions of the inspection on foot. Climbing inspections would be performed on an as needed basis, based on specific identified conditions and in compliance with CAISO guidelines and regulations.

2.10.3 Vegetation Management Programs

In accordance with vegetation clearance requirements in PRC Section 4292 and Title 14, Section 1254 of the CCR, LSPGC and PG&E would trim or remove flammable vegetation in the area surrounding the project alignment and all other safety hazards. For LSPGC, one-person crews typically conduct this work using mechanical equipment consisting of weed trimmers, rakes, shovels, and leaf blowers. PG&E's Vegetation Management teams consist of three-to-five person crews, using chainsaws, electric saws, loppers, or other hand tools to ensure vegetation is maintained at the legally required setback distance. The Manning Substation and proposed LSPGC 230 kV transmission line would be inspected on an annual basis to determine if vegetation trimming or clearing is required. LSPGC and PG&E vegetation management activities would ensure a continuous defensible area around the substation and within transmission and distribution line ROWs.

2.11 DECOMMISSIONING

LSPGC has no present plans to decommission the Manning Substation and LSPGC 230 kV transmission line as part of the project. In the event of future decommissioning of the Manning Substation, all structures would be removed, and the site would be made suitable for utility use. When feasible, all decommissioning debris would be recycled. Likewise, any debris that cannot be recycled would be disposed of at a licensed California Recovery Reuse and Recycling facility. Prior to removal or abandonment of any facilities, LSPGC would prepare a removal and restoration plan. The removal and restoration plan would address removal of the Manning Substation and LSPGC 230 kV transmission line from the permitted area; any requirements for restoration and revegetation; and the potential preparation of the property for future utility uses. The removal and restoration plan would then be approved by the CPUC prior to implementation. PG&E is not subject to decommissioning and would retain its facilities as long as they are useful.

2.12 APPLICANT-PROPOSED MEASURES (LSPGC) AND CONSTRUCTION MEASURES (PG&E)

LSPGC has developed APMs that are incorporated into LSPGC's components of the proposed project and listed in Table 2-11. PG&E is not an applicant in this proceeding and would not be subject to the APMs. However, PG&E has developed CMs that are incorporated into PG&E's components of the proposed project and listed in Table 2-12. The APMs and the CMs are considered binding descriptions of project design and implementation that are integral to the project. Those APMs and CMs that address physical effects on the environment are considered in the resource evaluations throughout this IS/MND.

LSPGC and PG&E would maintain an environmental compliance management program to allow for implementation of the APMs and CMs to be monitored, documented, and enforced during each project phase, as appropriate and respective to each entity. All those contracted by LSPGC or PG&E to perform this work would be contractually bound to properly implement the APMs and CMs.

Table 2-11 LSPGC Applicant-Proposed Measures

Measure	Measure Language
AES-1	Staging Area Maintenance and Restoration. All Manning 500/230 Kilovolt Substation Project (Proposed Project) sites will be maintained in a clean and orderly state. Construction staging areas will be sited away from public view where possible. Temporary nighttime lighting will be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of Proposed Project construction, staging and temporary work areas will be returned to pre-Proposed Project conditions, including regrading of the site and reseeding or repaving of disturbed areas to match pre-existing contours and conditions.
AG-1	Landowner Coordination. LS Power Grid California, LLC (LSPGC) will coordinate with landowners prior to construction and during restoration efforts. Measures to be implemented may include, but are not limited to, the following: <ul style="list-style-type: none"> ► Provide notice to landowners outlining construction activities and restoration efforts. ► Restore areas disturbed by construction of the Proposed Project in accordance with lease agreements, applicable operation and maintenance (O&M) standards, and environmental permit requirements. In areas containing permanent crops (e.g., grapevines or orchard crops) that must be removed to gain access to pole sites for construction purposes, LSPGC may provide compensation to the farmer and/or landowner in coordination with the landowner.
AIR-1	Tier 4 Construction Equipment. At least 75 percent of construction equipment with a rating between 100 and 750 horsepower will be required to use engines compliant with Environmental Protection Agency Tier 4 non-road engine standards. In the event that enough Tier 4 equipment is not available to meet the 75-percent threshold, documentation of the unavailability will be provided, and engines utilizing a lower standard will be used.
AIR-2	Dust Control. Measures to control fugitive dust emissions will be implemented during construction. These measures will be included in a Fugitive Dust Control Plan that will be prepared in accordance with San Joaquin Valley Air Pollution Control District requirements. The measures will be implemented as needed to control dust emissions. These measures will include, but may not be limited to, the following: <ul style="list-style-type: none"> ► Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance. ► Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or will be covered. ► Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material will be covered with tarps or maintain at least 6 inches of freeboard. ► Vehicles will adhere to a speed limit of 15 miles per hour (mph) on Proposed Project-specific construction routes and within temporary work areas.
BIO-1	Avoid Environmentally Sensitive Areas. Biological field surveys will be performed for any portion of the Proposed Project area not yet surveyed (e.g., areas that did not have landowner access, new or modified staging areas, pull sites, or other work areas). Sensitive biological resources or areas discovered during surveys will be subject to a buffer from construction activities in accordance with the applicable Proposed Project applicant-proposed measures (APMs). The findings of all biological field surveys on portions of the Proposed Project area not yet surveyed will be provided to the California Public Utilities Commission (CPUC) prior to construction commencing within those areas.

Measure	Measure Language
BIO-2	<p>Develop and Implement Restoration Plan. A Proposed Project-specific restoration plan will be prepared for areas to be temporarily disturbed by the Proposed Project. Actively cultivated agricultural fields, developed areas, or habitats disturbed as a result of activities not related to the Proposed Project will not be subject to the restoration plan. The restoration plan will include procedures for restoration activities, including plant species to be reseeded, procedures to reduce weed encroachment, and expected timeframes for restoration. Reseeding activities will be conducted in accordance with the Proposed Project Storm Water Pollution Prevention Plan. The restoration plan will be submitted to the CPUC for approval prior to the start of construction activities.</p>
BIO-3	<p>Worker's Environmental Awareness Program. A Worker's Environmental Awareness Program (WEAP) will be designed, implemented, and provided to all Proposed Project personnel, including construction supervisors and field personnel, prior to personnel commencing work on the Proposed Project. The WEAP will inform all construction personnel of the resource protection and avoidance measures, as well as procedures to be followed upon the discovery of environmental resources. Additionally, the WEAP will train all construction personnel on hazardous materials management, hazardous wastes and stained or odiferous soils identification, and applicable regulations. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:</p> <ul style="list-style-type: none"> ▶ A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to environmental and biological resource protection; ▶ Training on how to identify sensitive or special-status biological resources, environmentally sensitive area (ESA) boundaries, housekeeping (i.e., trash and equipment cleaning), safety, work stoppage, and communication protocol; ▶ A discussion of procedures to be followed in the event that unanticipated sensitive or special-status biological resources are discovered during implementation of the Proposed Project; ▶ A discussion of disciplinary and other actions that could be taken against persons violating environmental and biological resource protection laws and applicant policies; ▶ Training on the handling, storage, and disposal of hazardous materials and wastes in accordance with applicable regulations; ▶ Training on the identification of potentially hazardous wastes and stained or odiferous soils; and ▶ A statement by the construction company or applicable employer agreeing to abide by the WEAP and other applicable laws and regulations. <p>The WEAP will be submitted to and approved by the CPUC prior to construction.</p>
BIO-4	<p>Pre-Construction Plant Surveys. Prior to initial vegetation clearing and ground-disturbing activities in annual grassland habitat, a qualified biologist will conduct pre-construction surveys of the Proposed Project work area for special-status plants. Surveys will be conducted during the appropriate bloom period for Lost Hills crownscale and Panoche pepper-grass (i.e., April to September and February to June, respectively). No surveys will be conducted in actively cultivated agricultural fields, bare ground, or developed areas. In the event of the discovery of a previously unknown special-status plant, the area will be marked as a sensitive area and will be avoided to the maximum extent practicable. If avoidance of species listed under the federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) is not possible, the United States Fish and Wildlife Service (USFWS) and/or the California Department of Fish and Wildlife (CDFW) will be consulted. Any other construction activities that may impact sensitive biological resources, including movement of construction equipment and other activities outside of the fenced/paved areas, will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources.</p>
BIO-5	<p>Vehicle Cleaning. Prior to their initial arrival on the Proposed Project site, all construction equipment and vehicles that will travel or operate within annual grassland habitats and/or outside of approved access roads/designated parking areas (e.g., staging yards) within these habitats will be cleaned to avoid spread of noxious weeds and non-native invasive plant species.</p>

Measure	Measure Language
BIO-6	<p>Pre-Construction Wildlife and Burrow Surveys. Prior to initial vegetation clearance and ground-disturbing activities, a qualified biologist will conduct pre-construction surveys of the Proposed Project work area for special-status wildlife and burrows and dens potentially occupied by special-status wildlife. Surveys will be confined to Proposed Project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within 500-foot radius of annual grassland habitats. The qualified biologist will identify, flag, and map all burrows and dens potentially occupied by burrowing owl, San Joaquin antelope squirrel, giant kangaroo rat, and San Joaquin kit fox, and then confirm occupation of all potential burrows for buffers and avoidance. Methods of determining burrow occupancy may include, but will not be limited to, visual observations of scat or tracks outside burrow entrances, dusting burrow entrances with a tracking medium for a period of 3 days, installing trail cameras for nocturnal observations, small mammal trapping, or a combination of these methods as appropriate and in consultation with the CDFW and USFWS. If occupied burrows cannot be avoided, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.</p>
BIO-7	<p>Pre-Construction Giant Kangaroo Rat Surveys. Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the Proposed Project work area for giant kangaroo rat. Surveys will be confined to Proposed Project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the San Joaquin Kangaroo Rat Trapping Protocol (USFWS 2013). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.</p>
BIO-8	<p>Pre-Construction San Joaquin Kit Fox Surveys. Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the Proposed Project work area for San Joaquin kit fox. Surveys will be confined to Proposed Project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.</p>
BIO-9	<p>Pre-Construction San Joaquin Antelope Squirrel Surveys. Prior to the initiation of construction, a qualified biologist will conduct focused surveys of the Proposed Project work area for San Joaquin antelope squirrel in annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. If species presence is determined through these surveys, the CDFW will be consulted to ensure compliance with the CESA, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.</p>
BIO-10	<p>Burrow and Den Avoidance. If occupied burrows or dens are found during pre-construction wildlife and burrow surveys, adequate buffers will be established around burrows. Adequate buffers will be determined by a qualified biologist based on field conditions and resource agency guidelines. If avoidance of species listed under the FESA or CESA is not possible, the USFWS and/or CDFW will be consulted, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval, as appropriate. These plans may include, but will not be limited to the following:</p> <ul style="list-style-type: none"> ▶ Detailed description of trapping methodology, ▶ Detailed burrow excavation methods, ▶ Release location(s), ▶ Detailed release methods, ▶ Artificial burrow design and installation methods, ▶ Description of exclusion fencing type and implementation, and ▶ Identification of a wildlife rehabilitation center or veterinary facility capable of and willing to treat injured special-status species. <p>Any other construction activities that may impact burrows occupied by special-status species (including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat) will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources.</p>

Measure	Measure Language
BIO-11	Vehicle Travel. Vehicles will adhere to a speed limit of 15 mph on Proposed Project-specific unpaved construction routes where no posted speed limit exists and within temporary work areas. In addition, construction and maintenance employees will be required to stay on established and clearly marked and existing roads and within the limits of disturbance except when not feasible due to physical or safety constraints and will be advised that care should be exercised when commuting to and from the Proposed Project area to reduce accidents and animal road mortality.
BIO-12	Trapped Animal Prevention. All excavated holes/trenches that are not filled at the end of a workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife species.
BIO-13	Delineation of Work Areas. All work areas within the Proposed Project area will be clearly delineated with fencing, staking, or flags prior to construction commencing. Construction activities will be restricted to delineated work areas, and all delineation will be maintained in working order until completion of construction.
BIO-14	Project Lighting. The use of outdoor lighting during construction and O&M will be minimized whenever practicable. Photocell-controlled lighting (i.e., motion detection) will be provided at a level sufficient to provide safe entry and exit to the proposed LSPGC Manning Substation and control enclosures. All lighting will be selectively placed, shielded, and directed downward and away from sensitive habitat and resources to the maximum extent practicable.
BIO-15	Pre-Construction Blunt-Nosed Leopard Lizard Surveys. Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the Proposed Project work area for blunt-nosed leopard lizard in annual grassland habitats and disturbed habitats within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the Approved Survey Methodology for the Blunt-Nosed Leopard Lizard (CDFW 2019). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and a species-specific avoidance plan will be developed for agency review and approval. This plan will include an overview and results of blunt-nosed leopard lizard surveys, the proposed mitigation measure implementation strategy, and methods to avoid species take prior to and during construction activities.
BIO-16	Pre-Construction Crotch's Bumblebee Surveys. A pre-construction survey plan for Crotch's bumblebee will be developed and implemented for all Proposed Project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. The plan will detail survey methodology and reporting procedures. Prior to initial vegetation clearance and ground-disturbing activities, pre-construction surveys will be conducted to identify Crotch's bumblebee habitat and host plants present within the Proposed Project work areas. Photograph-only surveys will also be conducted in accordance with USFWS protocol recommendations (USFWS 2019) to determine adult bumblebee presence. Active Crotch's bumblebee nest sites may be incidentally observed during photograph-only surveys and will be identified as active based on repeated observations of bumblebee ingress and egress from the nest site and after consultation with the CDFW. Active nests will be marked for avoidance prior to construction.
BIO-17	Crotch's Bumblebee Nest and Host Plant Avoidance. If occupied Crotch's bumblebee nests are found during pre-construction bumblebee surveys, adequate buffers will be established around nests. Adequate buffers will be determined by a qualified biologist based on field conditions and resource agency guidelines. If avoidance of bumblebee nests is not possible, the CDFW will be consulted. If Crotch's bumblebee host plants are found during pre-construction bumblebee surveys, these will be avoided to the greatest extent feasible during construction activities. Any construction activities that may impact Crotch's bumblebee nests and/or host plants, including movement of construction equipment and activities outside of the fenced/paved areas within wildlife habitat, will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of occupied nests and host plants and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to Crotch's bumblebee.
BIO-18	Nesting Bird Avoidance. If feasible, construction and vegetation trimming/removal will be avoided during the migratory bird nesting or breeding season (i.e., February 15 to August 31). When it is not feasible to avoid construction during the nesting or breeding season, a survey will be performed in the area where the work is to occur. This survey will 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 (which will differ based on species and location of nest) will 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 federally or state-listed species, the USFWS and CDFW will be consulted as necessary. Monitoring of the nest will continue until the birds fledge or construction is no longer occurring on the site.
BIO-19	Vegetation. Vegetation and tree removal will be limited to the minimum area necessary to allow construction to proceed.

Measure	Measure Language
BIO-20	<p>Raptor Nests. If a raptor nest is observed during pre-construction surveys, a qualified biologist will determine if it is active. If the nest is determined to be active, the biological monitor will 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 Proposed Project are disturbing or disrupting nesting or breeding activities, the biological monitor will make recommendations to reduce noise or disturbance in the vicinity of the nest, such as temporarily suspending work in the area. If the nest is determined to be inactive, the nest will be removed under direct supervision of the qualified biologist.</p>
CUL-1	<p>Cultural Resources Awareness Training. In accordance with this measure, the Proposed Project's WEAP will 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 policies; and ▶ A statement by the construction company or applicable employer agreeing to abide by the WEAP, and other applicable laws and regulations. <p>The WEAP will be provided to all Proposed Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in ground-disturbing activities without having participated in the WEAP.</p>
CUL-2	<p>Avoid Environmentally Sensitive Areas. Cultural resources surveys will be performed for any portion of the Proposed Project area not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas). Cultural resources discovered during surveys will be subject to a 50-foot buffer around the boundary of each respective resource and designated as ESAs. Methods of ESA delineation may include, as applicable, flagging, rope, tape, or fencing. The ESAs should be clearly marked on all pertinent construction plans. Where operationally feasible, all National Register of Historic Places- (NRHP-) and California Register of Historical Resources- (CRHR-) eligible resources will be protected from direct Proposed Project impacts by Proposed Project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas). In addition, all historic properties/historical resources will be avoided by all Proposed Project construction, O&M, and restoration activities, where feasible. If work within the 50-foot buffer cannot be avoided, then monitoring will be required.</p>
CUL-3	<p>Inadvertent Discoveries. In the event that previously unidentified cultural resources are uncovered during implementation of the Proposed Project, all work within 50 feet of the discovery will be halted and redirected to another location. A qualified archaeologist(s) will inspect the discovery and determine whether further investigation is required. The qualifications of the archaeologist(s) will be approved by the CPUC. If the discovery can be avoided and no further impacts will occur, the resource will be documented on California Department of Parks and Recreation cultural resources records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, the significance and NRHP and CRHR eligibility of the resource will be evaluated and, in consultation with the CPUC, appropriate treatment measures will be determined. All work will remain halted until a Secretary of the Interior-qualified archaeologist approves the treatment measures. Preservation in place will be the preferred means to avoid impacts to significant historical resources. Consistent with California Environmental Quality Act (CEQA) Guidelines Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, and if the unearthed resource is prehistoric or Native American in nature, a Native American representative, in consultation with the CPUC, will develop additional treatment measures, such as data recovery consistent with CEQA Guidelines Section 15126.4(b)(3)(C-D). Archaeological materials recovered during any investigation will be curated at an accredited curation facility or transferred to the appropriate tribal organization.</p>

Measure	Measure Language
GEO-1	<p>Geological Hazards and Disturbance to Soils. The following measures will be implemented during construction to minimize impacts from geological hazards and disturbance to soils:</p> <ul style="list-style-type: none"> ▶ Keep vehicles and construction equipment within the limits of the Proposed Project and in approved construction work areas to reduce disturbance to topsoil. ▶ Prior to grading in temporary work areas, salvage topsoil to a depth of 6 inches or to the actual depth if shallower (as identified in a site-specific geotechnical investigation report) to avoid the 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 temporarily disturbed areas. Recontour temporarily disturbed areas following construction to match pre-construction grades. Site and manage on-site material storage in accordance with all required permits and approvals. ▶ Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Dispose of removed vegetation off site at an appropriate licensed facility, or it can be chipped on site to be used as mulch during restoration.
GHG-1	<p>Greenhouse Gas Emissions Reduction During Construction. The following measures will be implemented during construction to minimize greenhouse gas emissions:</p> <ul style="list-style-type: none"> ▶ If suitable park-and-ride facilities are available in the Proposed Project vicinity, construction workers will be encouraged to carpool to the job site. ▶ On-road and off-road vehicle tire pressures will be inflated to manufacturer specifications; tires will be checked and reinflated at regular intervals. ▶ Demolition debris will be recycled for reuse to the extent feasible. ▶ Line power, instead of diesel generators, will be used at all construction sites where feasible. ▶ Construction equipment will be maintained per the manufacturer's specifications.
HAZ-1	<p>Air Transit Coordination. LSPGC will implement the following protocols related to helicopter use during construction and air traffic:</p> <ul style="list-style-type: none"> ▶ LSPGC will comply with all applicable Federal Aviation Administration regulations regarding air traffic within 2 miles of the Proposed Project alignment. ▶ LSPGC's helicopter operator will coordinate all Proposed Project helicopter operations with local airports before and during Proposed Project construction. ▶ Helicopter use and landing zones will be managed to minimize impacts on local residents.
UTIL-1	<p>Conduct an Induction Study. An induction study will be conducted to evaluate the potential effects of the Proposed Project on pipelines in its vicinity. The study will comply with all national and international standards in addition to the following standards:</p> <ul style="list-style-type: none"> ▶ Pipeline Company Standards and Standard Operating Procedures; ▶ Federal Department of Transportation Part 192 Regulations; ▶ National Association of Corrosion Engineers (NACE) SP0177-2014 Standard Practice; ▶ NACE SP21424-2018 Standard Practice; and ▶ Institute of Electrical and Electronics Engineers Standard 80 Guide. <p>The study will model the electrical interference effects on pipelines during different electrical conditions, such as maximum load and fault conditions. Additionally, the study will perform a coating stress voltage and alternating current (AC) density analysis on the pipelines. The induction study will recommend AC mitigation methods based on the findings. Recommendations of the study will be incorporated into the final engineering and design for the Proposed Project as needed to ensure compliance with applicable standards.</p>

Measure	Measure Language
FIRE-1	<p>Construction Fire Prevention Plan. A Proposed Project-specific Construction Fire Prevention Plan (CFPP) will be prepared and submitted to the CPUC for review prior to initiation of construction. The CFPP will be fully implemented throughout the construction period and will include, at a minimum, the following:</p> <ul style="list-style-type: none"> ▶ The purpose and applicability of the plan; ▶ Responsibilities and duties; ▶ Preparedness training and drills; ▶ Procedures for fire reporting, response, and prevention that include the following: <ul style="list-style-type: none"> ▪ Identification of daily site-specific risk conditions, ▪ The tools and equipment needed on vehicles and to be on hand at sites, ▪ Reiteration of fire prevention and safety considerations during tailboard meetings, and ▪ Daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible activity; ▶ Coordination procedures with federal and local fire officials; ▶ Crew training, including fire safety practices and restrictions; and ▶ Method(s) for verifying that all Plan protocols and requirements are being followed. <p>A Proposed Project Fire Marshal or similarly qualified position will be established to enforce all provisions of the CFPP, as well as perform other duties related to fire detection, prevention, and suppression for the Proposed Project. Construction activities will be monitored to ensure implementation and effectiveness of the CFPP.</p>

Table 2-12 PG&E Construction Measures

Measure	Measure Language
GEN-1	<p>Standard Construction Practices. The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts.</p> <ul style="list-style-type: none"> ▶ Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable. ▶ Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety. ▶ Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable. ▶ Speed limit: vehicles will not exceed a speed limit of 15 miles per hour (mph) in the ROWs or on unpaved roads within sensitive land-cover types. ▶ Restoration and erosion control: on completion of any Proposed Project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions. ▶ Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or United States Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures. ▶ Staging Area Maintenance: Work sites will be maintained in a clean and orderly state. ▶ Environmentally Sensitive Areas: Biological field surveys will be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities. ▶ Aquatic resources: All aquatic resources will be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas. ▶ Vegetation: Vegetation and tree removal will be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements. ▶ Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife. ▶ Delineation of Work Areas: Work areas will be clearly delineated prior to construction commencing with fencing, staking, or flags.

Measure	Measure Language
AG-1	<p>Landowner Coordination. Pacific Gas and Electric Company (PG&E) will coordinate with landowners prior to construction and during restoration efforts. Measures to be implemented may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▶ Provide notice to landowners outlining construction activities and restoration efforts. ▶ Areas disturbed by construction of the Proposed Project restored in accordance with lease and easement conditions, applicable operation and maintenance standards, and environmental permit requirements. ▶ In areas containing permanent crops (i.e., grapevines, orchard crops, etc.) that must be removed to gain access to pole sites for construction purposes, PG&E may compensate the farmer and/or landowner in coordination with the landowner.
AIR-1	<p>Tier 4 Construction Equipment. At least 75 percent of construction equipment with a rating between 100 and 750 horsepower (hp) will be required to use engines compliant with Environmental Protection Agency Tier 4 non-road engine standards. In the event enough Tier 4 equipment are not available to meet the 75-percent threshold, documentation of the unavailability will be provided and engines utilizing a lower standard will be used.</p>
AIR-2	<p>Fugitive Dust Control. The following actions will be taken, as applicable and feasible, to control fugitive dust during construction. San Joaquin Valley Air Pollution Control District notifications will be made in accordance with any requirements in effect at the time of construction.</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 and grubbing, backfilling, trenching, and other earth-moving activities. ▶ Limit vehicle speed to 15 mph. ▶ Load haul trucks with a freeboard (space between top of truck and load) of 6 inches or greater. ▶ Cover the top of the haul truck load. ▶ Clean up track-out at least daily.
BIO-1	<p>Worker Environmental Awareness Training. A qualified biologist will develop an environmental awareness training program that is specific to the Proposed Project. All on-site construction personnel will attend the training before they begin work on the Proposed Project. Training will include a discussion of the construction management practices that are being implemented to protect biological resources as well as the terms and conditions of any Proposed Project permits.</p>
BIO-2	<p>Special-Status Plants. Prior to initial vegetation clearing and ground-disturbing activities in annual grassland habitat, a qualified biologist will conduct pre-construction surveys of the Proposed Project work area for special-status plants. If a covered plant species is present following special-status plant surveys, a qualified biologist will stake and flag exclusion zones of 100 feet around plant occupied habitat (both the standing individuals and the seed bank individuals) of the covered species prior to performing the activities. If an exclusion zone cannot extend the specified distance from the habitat, the biologist will stake and flag a restricted activity zone of the maximum practicable distance from the exclusion zone around the habitat. This exclusion zone distance is a guideline that may be modified by a qualified biologist, based on site-specific conditions (including habituation by the species to background disturbance levels). If avoidance of plant species listed under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) is not possible, the USFWS and/or CDFW will be consulted.</p>
BIO-3	<p>Giant Kangaroo Rat and San Joaquin Antelope Squirrel. Prior to the initiation of ground-disturbing activities in suitable grassland habitat, a qualified biologist will conduct pre-construction surveys of the Proposed Project work area for giant kangaroo rat and San Joaquin antelope squirrel. Personnel shall avoid occupied or potentially occupied burrows identified by a qualified biologist. If occupied or potentially occupied burrows in the core areas can be avoided by a minimum of 50 feet, then work can proceed. If occupied or potentially occupied burrows cannot be avoided by 50 feet, then a qualified biologist shall stake and flag an appropriate work-exclusion zone and remain on site as a biological monitor. If occupied burrows cannot be avoided, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval.</p>
BIO-4	<p>San Joaquin Kit Fox. Prior to the initiation of ground-disturbing activities in grassland habitat suitable for foraging and denning, a qualified biologist will conduct pre-construction surveys of the Proposed Project work area for San Joaquin kit fox. If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided. Exclusion zones for kit fox will be implemented following USFWS procedures (USFWS 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be determined on a case-by-case basis in coordination with the USFWS and CDFW. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. 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 for kit fox (USFWS 1999). If occupied, work activities will be delayed until the den is determined to no longer be active.</p>

Measure	Measure Language
BIO-5	<p>Blunt-Nosed Leopard Lizard. Prior to the initiation of activities within suitable arid, open habitat for blunt-nosed leopard lizard, a qualified biologist will conduct a pre-construction survey and will identify if burrows are present and if work can avoid burrows. If work can avoid suitable burrows, a qualified biologist will stake and flag an appropriate exclusion zone around the burrows prior to activities at the job site and monitor throughout the duration of ground-disturbing activities. If a blunt-nosed leopard lizard is observed and in danger of injury or mortality, all work must stop until the individual has voluntarily moved out of the work area.</p> <p>If burrows cannot be avoided, a qualified biologist will survey the workspace prior to ground- or vegetation-disturbing activities to determine presence/absence. Surveys will be conducted between April 15 and June 30 or August 1 and September 1 or when ambient temperatures are 77 to 95 degrees Fahrenheit and soil temperatures 86 to 122 degrees Fahrenheit. Six separate surveys of the site will occur between 9:00 a.m. and 2:00 p.m. If the species is not detected at the work site, then no further action is required. If blunt-nosed leopard lizard is present, then conduct work activity during the active period, clearly flag all access routes and staging areas, and monitor through the duration of work activities within occupied habitat.</p>
BIO-6	<p>Western Spadefoot. Avoid work in western spadefoot aquatic habitat (i.e., temporary rain pools, quiet streams, and stock tanks). Activities that require ground disturbance within 250 feet of occupied or suitable western spadefoot aquatic habitat will occur only after the ground surface is completely dry (typically June 1 to October 31 but will vary year to year). If this is not feasible, a biologist will conduct a pre-construction survey prior to work within 250 feet of occupied or suitable aquatic habitat and disturbance will be minimized as much as possible. Utility personnel will minimize disturbing burrows within 250 feet of suitable western spadefoot aquatic habitat. Utility personnel will utilize existing roadways within 250 feet of occupied or suitable western spadefoot aquatic habitat whenever possible. If an existing roadway cannot be used, only rubber-tired vehicles will be utilized in this area.</p>
BIO-7	<p>Western Burrowing Owl. Prior to the initiation of activities occurring in suitable grassland habitat, a qualified biologist will conduct pre-construction surveys for active burrows no more than 30 days prior and no less than 14 days prior to the start of construction in accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If western burrowing owls are present at the site, a qualified biologist will establish an exclusion zone in accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If a biologist experienced with burrowing owl determines the relocation of owls is necessary, a passive relocation effort may be conducted as described below, in coordination with the CDFW as appropriate. During the nonbreeding season (generally September 1 to January 31), a qualified biologist may passively relocate burrowing owls found within construction areas. Prior to passively relocating burrowing owls, a Burrowing Owl Exclusion Plan shall be prepared by a qualified biologist in accordance with Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The Burrowing Owl Exclusion Plan shall be submitted to the CDFW for review as required. The biologist shall accomplish such relocations using one-way burrow doors installed and left in place for at least two nights; owls exiting their burrows will not be able to re-enter. Then, immediately before the start of construction activities, the biologists shall remove all doors and excavate the burrows to ensure that no animals are present in the burrow. The excavated burrows shall then be backfilled. To prevent evicted owls from occupying other burrows in the impact area, the biologist shall, before eviction occurs:</p> <ul style="list-style-type: none"> (1) install one-way doors and backfill all potentially suitable burrows within the impact area; and (2) install one-way doors in all suitable burrows located within approximately 50 feet of the active burrow, then remove them once the displaced owls have settled elsewhere. When temporary or permanent burrow-exclusion methods are implemented, the following steps shall be taken: Prior to excavation, a qualified biologist shall verify that evicted owls have access to multiple, unoccupied, alternative burrows, located nearby (within 250 feet) and outside of the projected disturbance zone. If no suitable alternative natural burrows are available for the owls, then, for each owl that is evicted, at least two artificial burrows shall be installed in suitable nearby habitat areas. Installation of any required artificial burrows preferably shall occur at least 2 to 3 weeks before the relevant evictions occur, to give the owls time to become familiar with the new burrow locations before being evicted. The artificial burrow design and installation shall be described in the Burrowing Owl Exclusion Plan per Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Passive relocation of burrowing owls shall be limited in areas adjacent to Proposed Project activities that have a sustained or low-level disturbance regime; this approach shall allow burrowing owls that are tolerant of Proposed Project activities to occupy quality, suitable nesting and refuge burrows. The use of passive relocation techniques in a given area shall be determined by a qualified biologist who may consult with the CDFW, and shall depend on existing and future conditions (e.g., time of year, vegetation/topographic screening, and disturbance regimes).

Measure	Measure Language
BIO-8	<p>CM BIO-8: Migratory Birds. Prior to work activities conducted during the nesting bird season (February 1 to August 31), the work area will be inspected for nests. If a nest is discovered, a biologist will be contacted to determine the nest status, the species of the nesting birds, and if work activities are likely to impact the nest. If a nest is confirmed active (i.e., the nest contains eggs or young or the adults are exhibiting nesting behaviors such as siting in the nest, carrying food to the nest, etc.), designated avoidance buffers will be required and implemented according to the most recent PG&E Nesting Bird Management Plan and guidance available. The established buffers will remain in effect until the young have fledged or the nest is no longer active, as confirmed by the biologist. The biologist will have authority to order the cessation of nearby work activities or adjust buffers if nesting pairs exhibit signs of disturbance. Buffer sizes may be reduced if the biologist determines that a reduced buffer size will not result in the abandonment of the nest or failure based on compelling biological and ecological reasoning (e.g., the biology of the bird species, concealment of the nest by topography, land use type, vegetation, and the level of project activity). Inactive nests may be removed in accordance with PG&E's approved avian permits.</p>
CUL-1	<p>Worker Awareness Training. PG&E will provide environmental awareness training on archaeological and paleontological resources protection. This training may be administered by the PG&E cultural resources specialist (CRS) or a designee as a stand-alone training or included as part of the overall environmental awareness training as required by the Proposed Project and will at minimum include: types of cultural resources or fossils that could occur at the Proposed Project site; types of soils or lithologies in which the cultural resources or fossils could be preserved; procedures that should be followed in the event of a cultural resource, human remain, or fossil discovery; and penalties for disturbing cultural or paleontological resources.</p>
CUL-2	<p>Flag and Avoid Known Resources. Sites will be marked with flagging tape, safety fencing, and/or sign designating it as an "environmentally sensitive area" to ensure that PG&E construction crews and heavy equipment will not intrude on these sites during construction. At the discretion of the PG&E CRS, monitoring may be done in lieu of or in addition to flagging. If it is determined that the Proposed Project cannot avoid impacts on one or more of the sites, then, for those sites that have not been previously evaluated, evaluation for inclusion in the National Register of Historic Places/California Register of Historical Resources (NRHP/CRHR) will be conducted. Should the site be found eligible, appropriate measures to reduce the impact to a less-than-significant level will be implemented, including but not limited to data recovery, photographic and archival documentation, or other measures as deemed appropriate. If it is determined that sites that have been previously determined to be eligible for inclusion in either the NRHP or CRHR cannot be avoided, measures will be implemented to reduce the impact to a less-than-significant level, including but not limited to data recovery, photographic and archival documentation, or other measures as deemed appropriate.</p>
CUL-3	<p>Unanticipated Cultural Resources and Paleontological Discoveries.</p> <p>a. Unanticipated Cultural Resources.</p> <p>If unanticipated cultural resources are inadvertently discovered during site preparation or construction activities, work will stop in that area and within 50 feet of the find until the CRS or their qualified designee can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with PG&E and other appropriate agencies. Work may continue on other portions of the site with the CRS's approval. PG&E will implement the CRS's or their designee's recommendations for treatment of discovered cultural resources.</p> <p>b. Human Remains.</p> <p>In the unlikely event that human remains or suspected human remains are uncovered during pre-construction testing or during construction, all work within 50 feet of the discovery will be halted and redirected to another location. The find will be secured, and the CRS or designated representative will be contacted immediately to inspect the find and determine whether the remains are human. If the remains are not human, the CRS will determine whether the find is an archaeological deposit and whether paragraph (a) of this APM should apply. If the remains are human, the CRS will immediately implement the applicable provisions in Public Resources Code (PRC) Sections 5097.9 through 5097.994, beginning with the immediate notification to the affected county coroner. The coroner has two working days to examine human remains after being notified. If the coroner determines that the remains are Native American, California Health and Safety Code 7050.5 and PRC Section 5097.98 require that the CRS contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC, as required by PRC Section 5097.98, will determine and notify the Most Likely Descendant.</p> <p>c. Paleontological Discoveries.</p> <p>If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and California Public Utilities Commission (CPUC). The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.</p>

Measure	Measure Language
GEO-1	<p>Minimize Construction in Soft or Loose Soils. Where soft or loose soils are encountered during Proposed Project construction, several actions are available, feasible, and can be implemented to avoid, accommodate, replace, or improve such soils. Depending on site-specific conditions and permit requirements, one or more of these actions may be implemented to eliminate impacts from soft or loose soils:</p> <ul style="list-style-type: none"> ▶ Locating construction facilities and operations away from areas of soft and loose soil. ▶ Over-excavating soft or loose soils and replacing them with engineered backfill materials. ▶ Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction. ▶ Installing material, such as aggregate rock, steel plates, or timber mats, over access roads. ▶ Treating soft or loose soils in place with binding or cementing.
PALEO-1	<p>Unanticipated Paleontological Discoveries. If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and the CPUC. The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.</p>
GHG-1	<p>Greenhouse Gas Emissions Reduction During Construction. The following actions will be taken, as feasible, to minimize greenhouse gas emissions.</p> <ul style="list-style-type: none"> ▶ Encourage construction workers to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Proposed Project will depend upon the proximity of carpool facilities to the area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the project's construction schedule. ▶ Minimize unnecessary construction vehicle idling time for on-road and off-road vehicles. The ability to limit construction vehicle idling time will depend on the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use. ▶ Maintain construction equipment in proper working conditions in accordance with PG&E standards. ▶ Minimize construction equipment exhaust by using low-emission or electric construction equipment, where feasible. Portable diesel fueled construction equipment with engines 50 hp or larger and manufactured in 2000 or later will be registered under the California Air Resources Board Statewide Portable Equipment Registration Program. ▶ Minimize welding and cutting by using compression of mechanical applications (utilizing mechanical pressure to create a secure connection between metal components) where practical and within standards. ▶ Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available. ▶ Encourage recycling construction waste where feasible.

Measure	Measure Language
HAZ-1	<p>Hazardous-Substance Control and Emergency Response. PG&E will implement standard hazardous substance control and emergency response procedures to ensure the safety of the public and site workers during construction. The procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of Proposed Project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on-site. If it is necessary to store chemicals on-site, they will be managed in accordance with all applicable regulations. Material safety data sheets will be maintained and kept available on-site, as applicable.</p> <p>Proposed Project construction will involve soil surface blading/leveling, excavation of up to several feet, and auguring to a maximum depth of 35 feet in some areas. 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 will be tested, and if contaminated above hazardous waste levels, will be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.</p> <p>All hazardous materials and hazardous wastes will be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▶ Proper disposal of potentially contaminated soils. ▶ Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources. ▶ Emergency response and reporting procedures to address hazardous material spills. ▶ Stopping work at that location and contacting the County Fire Department Hazardous Materials Unit immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Unit.
HAZ-2	<p>Worker Environmental Awareness. The training will include the following components related to hazards and hazardous materials:</p> <ul style="list-style-type: none"> ▶ PG&E Health, Safety, and Environmental expectations and management structure. ▶ Applicable regulations. ▶ Summary of the hazardous substances and materials that may be handled and/or to which workers may be exposed. ▶ Summary of the primary workplace hazards to which workers may be exposed. ▶ Overview of the controls identified in the Storm Water Pollution Prevention Plan.
HAZ-3	<p>Air Transit Coordination. PG&E will implement the following protocols related to helicopter use during construction and air traffic:</p> <ul style="list-style-type: none"> ▶ PG&E will comply with all applicable Federal Aviation Administration regulations regarding air traffic within 2 miles of the Proposed Project alignment. ▶ PG&E's helicopter operator will coordinate all Proposed Project helicopter operations with local airports before and during Proposed Project construction. ▶ Helicopter use and landing zones will be managed to minimize impacts on local residents.
NOI-1	<p>Employ Noise-Reducing Construction Practices during Temporary Construction Activities. PG&E will employ standard noise-reducing construction practices such as the following:</p> <ul style="list-style-type: none"> ▶ Ensure that all equipment is equipped with mufflers that meet or exceed factory new-equipment standards. ▶ Locate stationary equipment as far as practical from noise-sensitive receptors. ▶ Limit unnecessary engine idling. ▶ Limit all construction activity near sensitive receptors to daytime hours unless required for safety or to comply with line clearance requirements. Minimize noise-related disruption by notifying residents. Should nighttime Proposed Project construction be necessary because of planned clearance restrictions, affected residents will be notified at least 7 days in advance by mail, personal visit, or door hanger, and informed of the expected work schedule.

Measure	Measure Language
TRA-1	Temporary Traffic Controls. PG&E will obtain any necessary transportation and encroachment permits from the California Department of Transportation and the local jurisdictions, as required, including those related to state route crossings and the transport of oversized loads and certain materials, and will comply with permit requirements designed to prevent excessive congestion or traffic hazards during construction. PG&E will develop road and lane closure or width reduction or traffic diversion plans as required by the encroachment permits. Construction activities that are in or along or that cross local roadways will follow best management practices and local jurisdictional encroachment permit requirements—such as traffic controls in the form of signs, cones, and flaggers—to minimize impacts on traffic and transportation in the Proposed Project area.
TRA-2	Coordinate Road Closures with Emergency Service Providers. At least 24 hours prior to implementing any road or lane closure, PG&E will coordinate with applicable emergency service providers in the Proposed Project vicinity. PG&E will provide emergency service providers with information regarding the road or lanes to be closed; the anticipated date, time, and duration of closures; and a contact telephone number.
FIRE-1	Fire Risk Management. PG&E will follow its standard fire risk management procedures, including: <ul style="list-style-type: none"> ▶ Safe work practices, training, and fire response. ▶ Proposed Project personnel will be directed to park away from dry vegetation. ▶ During fire season in designated State Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federally approved or State-approved spark arrestors. ▶ All off-road vehicles will be equipped with a backpack pump (filled with water) and a shovel. ▶ Fire-resistant mats and/or windscreens will be used when welding. In addition, during fire “red flag” conditions (as determined by the California Department of Forestry and Fire Protection), welding will be curtailed. ▶ Every fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C, and all flammable materials will be removed from equipment parking and storage areas. ▶ Coordinate procedures with federal and local fire officials. ▶ Identification of daily site-specific risk conditions.

2.13 ANTICIPATED PERMITS AND APPROVALS

The CPUC is the lead agency for this project pursuant to CEQA. LSPGC will comply with CPUC GO 131-D, which establishes permitting requirements for electrical transmission projects, or its successor regulation. Although PG&E is not applying for a CPCN, PG&E’s scope of work is needed to interconnect the project to PG&E’s electrical grid. Therefore, although PG&E’s interconnection facilities are not being approved in this proceeding, PG&E’s switching station and substation modifications, structure raises, transmission line re-routes, transposition structures, interconnections, and reconductoring are considered part of the proposed project for purposes of this CEQA analysis. PG&E will rely on this CEQA document to separately comply with the CPUC’s permitting requirements under GO 131-E. The proposed PG&E scope of work includes looping existing PG&E transmission lines (230 kV and 500 kV) into the proposed Manning Substation and reconductoring PG&E’s existing Panoche-Tranquillity #1 and #2 230 kV lines. PG&E assumes that looping the existing lines into the new substation would constitute “extensions” of existing transmission facilities pursuant to Section 564 of the California Public Utilities Code and Section III.A of GO 131-E, while reconductoring and rerouting the lines would constitute “modifications” of existing transmission facilities, enabling PG&E to file a Notice of Construction for the interconnection facilities under Section III.B.1 of GO 131-E. In any event, PG&E will comply with the requirements of GO 131-E or its successor.

In addition to the CPCN, LSPGC may be required to obtain other permits from federal, state, and local agencies including the FAA, Bureau of Reclamation (USBR), Caltrans, California Department of Fish and Wildlife (CDFW), State Water Resources Control Board, Fresno County, and San Joaquin Valley Air Pollution Control District. PG&E may also be required to obtain these permits.

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3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1. Project Title: LS Power Grid California, LLC's Manning 500/230 Kilovolt Substation
2. Lead Agency Name and Address: California Public Utilities Commission
3. Contact Person and Phone Number: Tommy Alexander, (213) 266-4748
4. Project Location: Fresno County
5. Project Sponsor's Name and Address: LS Power Grid California, LLC
16 Main Circle Drive, Suite 310
Chesterfield, MO 63017
6. General Plan Designation: Agriculture
7. Zoning: Agriculture
8. Description of Project:

The project entails construction and operation of the new Manning Substation and one new 12-mile overhead double-circuit 230 kilovolt (kV) transmission line that would extend from the proposed Manning Substation to interconnect with Pacific Gas & Electric's (PG&E) existing Tranquillity Switching Station. The project would also include interconnections, reconductoring, and related modification of PG&E's existing transmission lines and related facilities.
9. Surrounding Land Uses and Setting: The proposed project is located in western Fresno County surrounded by agricultural operations.
10. Other public agencies whose approval is required: Fresno County, CDFW, and Caltrans.
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In accordance with Public Resources Code section 21080.3.1 as enacted by Assembly Bill (AB) 52 (Statutes of 2014), Native American tribal contacts in Fresno County were sent letters via email and certified mail on September 17, 2024. The CPUC sent letters to the following tribal contacts: Cultural Resources Director Bob Pennell of the Table Mountain Rancheria.

No request to consult was received. Refer to Section 3.18, "Tribal Cultural Resources", for more details regarding tribal consultation and associated mitigation measures.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

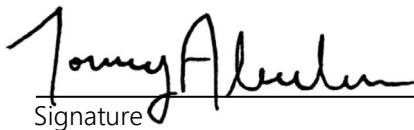
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "less than significant with mitigation" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be reduced to less than significant with the implementation of project specific mitigation measures.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards / Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |
| | <input type="checkbox"/> None | <input type="checkbox"/> None with Mitigation Incorporated |

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.



Signature

March 11, 2025

Date

Tommy Alexander

Printed Name

CEQA Project Manager

Title

California Public Utilities Commission

Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), 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 points.) 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 day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1.1 Environmental Setting

The following environmental setting summarizes results reported in the visual resources technical report prepared by LSPGC for the project (Insignia Environmental 2024) and reviewed by Ascent, including via field reconnaissance that was conducted by Ascent in March 2024. The visual resources technical report is provided as Appendix C.

REGIONAL SETTING

Visual quality is defined as the overall visual impression or attractiveness of an area as determined by the landscape characteristics, including landforms, rock forms, water features, vegetation patterns, and built features. 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.

Fresno County is one of the eight counties that collectively form the greater San Joaquin Valley. The county covers approximately 6,000 square miles stretching from the Coast Range mountains in the west to the Sierra Nevada range in the east. The San Joaquin Valley region extends from the Sacramento–San Joaquin River Delta in the north to the Tehachapi Mountains in the south. The valley’s primary river is the San Joaquin, which drains north through about half of the valley into the Sacramento–San Joaquin River Delta (Fresno County 2023).

Major land uses in Fresno County are agriculture, public lands, and open space, with approximately 50 percent of land used for agricultural purposes (Fresno County 2023). The Sierra Nevada mountains make up much of the eastern half of the county. Eastern Fresno County consists mostly of public lands, including the Sierra and Sequoia National Forests and Kings Canyon National Park. The central and western portions of the county are primarily agriculture and open space.

PROJECT ALIGNMENT AREA SETTING

The project alignment area would be located in unincorporated areas of western Fresno County, east of the Bureau of Land Management's Tumey Hills recreation area, south of Manning Avenue, and approximately 12 miles west of the City of San Joaquin (see Figures 2-1 and 2-2). The majority of the project alignment would cross over privately owned agricultural land, as well as the California Aqueduct irrigation canal and Interstate 5 (I-5).

The project alignment area is relatively flat with long views and almost exclusively agricultural and energy uses. The landscape descends gradually from roughly 650 feet above sea level at the base of the coastal foothills to 225 feet above sea level where the proposed 230 kV transmission line terminates at the existing Tranquillity Switching Station. There are few residences or structures in the project vicinity, resulting in the local, flat, open roads being sparsely travelled. In contrast, I-5, consisting of two lanes in each direction, is a busy route for travelers accessing destinations north and south of the project alignment area. The California Aqueduct irrigation canal is also within the project alignment area; it is concrete lined with gravel shoulders and approximately 200 feet wide.

VISUAL CHARACTER SURROUNDING THE PROJECT ALIGNMENT AREA

Large-scale agricultural lands consisting of orchards and row crops cover much of the valley floor from the foothills to the California Aqueduct irrigation canal. These large farms provide a sense of open space and allow motorists opportunities for unrestricted panoramic views. The landscape is noticeably dotted with existing transmission line lattice steel towers (LSTs) and occasional electrical substations and switching stations, including large solar photovoltaic installations, which have become part of the local landscape character.

Also noticeable in the landscape are the coastal foothills, just west of I-5. The foothills are characterized by rolling hills with small peaks. The vegetation in the foothills is a typical grassland, which includes green grasses with colorful wildflowers in the rainy, cooler season and shades of tan to brown during the dry season. The agricultural lands include a patchwork of green and brown. Orchards and other row crops are a range of shades of green to primarily brown on the landscape. Although predominantly agricultural, there are single-family residences scattered throughout the project alignment vicinity.

The character surrounding the proposed substation site is visually consistent with the majority of the project alignment area, including flat agricultural lands surrounded by remote unpaved roads. Arid mountains rise to the west of the project alignment area. There are no residences located within view of the proposed substation site.

SCENIC RESOURCES, HIGHWAYS, AND CORRIDORS

Scenic resources are those natural and built landscape patterns and features that are considered visually or aesthetically pleasing and, therefore, contribute positively to the definition of a distinct community or region. The Fresno County General Plan identifies the scenic resources and scenic roadways as an important part of the county's quality of life. These scenic resources are described as "a diverse landscape ranging from fine cultivated farmlands of the valley and foothill grasslands to high mountain peaks" (Fresno County 2024).

According to the Open Space and Conservation Element of the County's General Plan, I-5 is the nearest scenic resource to the project alignment area. The project alignment would cross I-5 at Manning Avenue. However, I-5 is not a proposed or eligible state-designated scenic highway (Caltrans 2024a). No scenic vistas, national scenic areas, state-designated scenic highways (Caltrans 2024a), or other identifiable scenic resources are located within the vicinity of the project alignment.

SCENIC VISTAS

A scenic vista is an area that is designated, signed, and accessible to the public for the purposes of viewing and sightseeing. There are no scenic vistas in the vicinity of the project.

LIGHT AND GLARE CONDITIONS

Existing sources of light and glare are largely limited as a result of the predominantly rural setting of the project alignment area. Existing sources of light in the project vicinity tend to be localized and associated with agricultural processing facilities, residences, and some roadway intersections. Street lighting and outdoor industrial facility lighting are in place at the existing Tranquillity Switching Station. There are no existing sources of light at the proposed substation site.

Glare is a visual sensation caused by excessive and uncontrolled brightness, which can be disabling or uncomfortable. Natural and artificial light reflects off various surfaces (e.g., building surfaces, windows of buildings, and automobiles) and can create localized occurrences of daytime and nighttime glare. Given the rural nature of the project alignment area, glare is caused occasionally and predominately from passing motorists along nearby roads.

VIEWERS AND VISUAL SENSITIVITY

Viewer groups consist predominantly of motorists traveling along local public roadways, including I-5, State Route (SR) 33, and Manning Avenue, which are close to or cross the project alignment. However, along many of these roadways, motorists' views of adjacent parcels are screened by roadside vegetation, such as orchards and stands of mature trees. Furthermore, views tend to be brief or moderate in duration depending upon the travel route and type of roadway and could range from a few seconds to up to several minutes. Given the short duration of views and the transience of most viewers, motorists' viewer sensitivity is considered low to moderate. The second largest viewer group are agricultural workers, harvesting crops or otherwise tending to agricultural lands. The duration of workers' views can be long depending on the work being performed. Additional viewer groups consist of a few residents situated near the project alignment area, including inhabitants of rural properties located along Manning Avenue and between I-5 and the California Aqueduct. Residential views are long in duration. However, mature trees, orchards, and other vegetation on residential properties provide a measure of screening of the project alignment area at these locations.

Visual sensitivity associated with views in a particular area is the combination of viewer sensitivity and viewer exposure. Viewer sensitivity is based on identification of general viewer groups in the project area and their anticipated awareness and concerns for aesthetics. Viewer sensitivity varies for individuals and groups depending on the activities viewers are engaged in, their values and expectations related to the appearance and character of the landscape, and their potential level of concern for changes to the landscape. Viewer exposure involves the visibility of resources in the landscape, proximity of viewers to visual resources, elevational position of viewers relative to visual resources, frequency and duration of views, and number of viewers.

VIEWSHED ANALYSIS

The project alignment area is relatively flat and includes flat land with gentle slopes in the San Joaquin Valley. The viewshed is enclosed by the coastal foothills on the south and west and views of farmland extending to the horizon to the north and east. The overall landscape is one of generally undisturbed foothills featuring native grassland slopes to the west and extensive agriculture dotted with energy/transmission development to the north, east, and south. Fields are alternately bare soil, non-native grasses covering disturbed soil, low-growing crops, and orchards.

Given the general flatness of the landscape, the viewer has an approximately 2-mile viewshed distance from any point. The actual project alignment area viewshed extends east to west from the foothills to near SR 33, and from West South Avenue to the north and West Rose Avenue to the south. Within this area, the presence of large, dense orchards obscures many views, and atmospheric conditions, such as fog and haze or smog, regularly limit the clarity of views and reduce the visible distance.

PUBLIC VIEWS: REPRESENTATIVE VIEWPOINTS

Selected viewpoints were chosen to represent publicly accessible views of the project alignment area and to characterize the visual environment. These viewpoints serve as a basis for describing the existing visual setting along the proposed project alignment. Specifically, five viewpoints were selected to represent the existing visual character of the project alignment area. Descriptions of views from these viewpoints and an assessment of visual quality and character of the views are provided below. Viewpoint locations and photographs from each viewpoint are depicted in Figure 3.1-1 and Figures 3.1-2a through 3.1-2c, respectively.

Representative Viewpoints

Viewpoint 1: Tranquillity Switching Station

Viewpoint 1 (Figure 3.1-2a) is a representative view of the existing Tranquillity Switching Station site from a public access road east of South Ohio Avenue. As demonstrated in the view, industrial elements such as high voltage transmission lines and associated structures heavily dominate the view from this angle under existing conditions.

Viewpoint 2: California Aqueduct Crossing

Viewpoint 2 (Figure 3.1-2a) is a view of the California Aqueduct irrigation canal. Taken at standing eye-level, this photograph of the California Aqueduct is framed by the masonry canal wall and paved vehicle overpass. Seen in the background silhouetted against the sky, wood utility poles support numerous overhead distribution and telecommunication lines.

Viewpoint 3: Transmission Connection Crossing

Viewpoint 3 (Figure 3.1-2b) represents the view of where the proposed PG&E and LSPGC 230 kV connection lines and the LSPGC telecommunication line would connect with the existing Panoche-Tranquillity 230 kV line. The visual character of this viewpoint is predominantly undeveloped and rural. The view consists of a cultural landscape with a farm and active fields in foreground and middleground, existing energy infrastructure in the middleground, and foothills in the background. The view is one of the more attractive (above average) landscapes in the area but not high quality or exceptional. There is an overall natural composition to the landscape with the blend of colors and rugged line of the foothills.

Viewpoint 4: Interstate 5 Crossing

Viewpoint 4 (Figure 3.1-2b) represents a view facing toward I-5 from the proposed project alignment. Agricultural fields can be observed in the foreground with I-5 in the background view. The view from I-5 is average, containing common and typical landscapes for this area. It lacks significant natural or cultural features of interest. Levels of natural harmony, cultural order, and project coherence are average.

Viewpoint 5: LSPGC Manning Substation Site

Viewpoint 5 (Figure 3.1-2c) shows the proposed substation site from a rural public road located between privately owned undeveloped agricultural land. In the center of the view, existing service lines can be seen traversing across the valley, silhouetted against the sky above rudimentary fencing and grasses. While the view of the foothills in the background is attractive and harmonious, the foreground somewhat lacks interest or cultural order.



Source: Adapted by Ascent in 2024.

Figure 3.1-1 Photograph Viewpoint Locations



Source: Photograph taken by Ascent in 2024.

Viewpoint 1: View of the Tranquillity Switching Station.



Source: Photograph taken by Ascent in 2024.

Viewpoint 2: View of the California Aqueduct crossing.

Figure 3.1-2a Representative Photographs



Source: Photograph taken by Ascent in 2024.

Viewpoint 3: View of the transmission connection crossing.



Source: Photograph taken by Ascent in 2024.

Viewpoint 4: View of the Interstate 5 crossing.

Figure 3.1-2b Representative Photographs



Source: Photograph taken by Ascent in 2024.

Viewpoint 5: View of the proposed LSPGC Manning Substation site.

Figure 3.1-2c Representative Photographs

3.1.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics are applicable to the project.

STATE

California Scenic Highway Program

California's Scenic Highway Program was designed to protect scenic state highway corridors from changes that would diminish the aesthetic value of the land adjacent to the highways. The program is administered by the California Department of Transportation (Caltrans). A California highway may be designated as scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view (Caltrans 2024b).

LOCAL

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the County regulations are not applicable as Fresno County does not have jurisdiction over the project. However, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024) contains the following policies that are relevant to the project:

- ▶ **Policy LU-B.11:** The County shall require that new development requiring a County discretionary permit be planned and designed to maintain the scenic open space character of rangelands including view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible, and use design, construction and maintenance techniques that minimize the visibility of structures on hillsides, ridgelines, steep slopes, and canyons.

GOAL LU-D: To promote continued agricultural uses along Interstate 5, to the extent water is available, protect scenic views along the freeway, promote the safe and efficient use of the freeway as a traffic carrier, discourage the establishment of incompatible and hazardous uses along the freeway, and provide for attractive, coordinated development of commercial and service uses that cater specifically to highway travelers, and of agriculture-related uses at key interchanges along Interstate 5.

- ▶ **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.

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. Definitions and designated roadways are shown in the Scenic Roadways list below.
- ▶ **Policy OS-L.3:** The County shall manage the use of land adjacent to scenic drives and scenic highways based on the following principle:
 - **Principle 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.
- ▶ **Policy OS-L.4:** The County shall require proposed new development along designated scenic roadways within urban areas and unincorporated communities to underground utility lines on and adjacent to the site of proposed development or, when this is infeasible, to contribute their fair share of funding for future undergrounding.

3.1.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CMs) that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to aesthetics.

LSPGC APMS

- ▶ **APM AES-1: Staging Area Maintenance and Restoration.** All project sites will be maintained in a clean and orderly state. Construction staging areas will be sited away from public view where possible. Temporary nighttime lighting will be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, staging and temporary work areas will be returned to pre-project conditions, including regrading of the site and reseeding or repaving of disturbed areas to match pre-existing contours and conditions.

- ▶ **APM AIR-2: Dust Control.** Measures to control fugitive dust emissions will be implemented during construction. These measures will be included in a Fugitive Dust Control Plan that will be prepared in accordance with SJVAPCD requirements. The measures will be implemented as needed to control dust emissions. These measures will include, but may not be limited to, the following:
 - Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance.
 - Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or would be covered.
 - Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material would be covered with tarps or maintain at least 6 inches of freeboard.
 - Vehicles will adhere to a speed limit of 15 mph on project-specific construction routes and within temporary work areas.
- ▶ **APM BIO-14: Project Lighting.** The use of outdoor lighting during construction and O&M will be minimized whenever practicable. Photocell-controlled lighting (i.e., motion detection) will be provided at a level sufficient to provide safe entry and exit to the proposed LSPGC Manning Substation and control enclosures. All lighting will be selectively placed, shielded and directed downward and away from sensitive habitat and resources to the maximum extent practicable.
- ▶ **APM GEO-1: Geological Hazards and Disturbance to Soils.** The following measures will be implemented during construction to minimize impacts from geological hazards and disturbance to soils:
 - Keep vehicles 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 6 inches or to the actual depth if shallower (as identified in a site-specific geotechnical investigation report) to avoid the 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 temporarily disturbed areas. Recontour temporarily disturbed areas following construction to match pre-construction grades. Site and manage on-site material storage in accordance with all required permits and approvals.
 - Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Dispose of removed vegetation off site at an appropriate licensed facility, or it can be chipped on site to be used as mulch during restoration.

PG&E CMS

- ▶ **CM AIR-2: Fugitive Dust Control.** The following actions will be taken, as applicable and feasible, to control fugitive dust during construction. SJVAPCD notifications would be made in accordance with any requirements in effect at the time of construction:
 - Apply water to disturbed areas and to storage stockpiles.
 - Apply water in sufficient quantities to prevent dust plumes during activities such as clearing and grubbing, backfilling, trenching, and other earth-moving activities.
 - Limit vehicle speed to 15 mph.
 - Load haul trucks with a freeboard (space between top of truck and load) of 6 inches or greater.
 - Cover the top of the haul truck load.
 - Clean up track-out at least daily.

- **CM GEN-1: Standard Construction Practices.** The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts:
- Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
 - Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety.
 - Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable.
 - Speed limit: vehicles will not exceed a speed limit of 15 mph in the ROWs or on unpaved roads within sensitive land-cover types.
 - Restoration and erosion control: on completion of any Proposed Project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions.
 - Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or U.S. Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures.
 - Staging Area Maintenance: Work sites would be maintained in a clean and orderly State.
 - Environmentally Sensitive Areas: Biological field surveys would be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities.
 - Aquatic resources: All aquatic resources would be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas.
 - Vegetation: Vegetation and tree removal would be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements.
 - Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife.
 - Delineation of Work Areas: Work areas would be clearly delineated prior to construction commencing with fencing, staking, or flags.

3.1.4 Discussion

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

LSPGC and PG&E Project Components

The project alignment area and proposed substation site are situated in a predominately rural agricultural setting that is generally flat. There are no unique or elevated areas where high-quality views would be available. Although limited views of natural areas are available there are no scenic vistas in the vicinity of the project alignment area.

Therefore, the construction and addition of distribution lines and related infrastructure along the project alignment would not affect any scenic vistas. There would be **no impact**.

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

There are no designated state scenic highways located within the vicinity of the project alignment area. The nearest eligible state highway is located approximately 34 miles west of the project alignment area along SR 25 (Caltrans 2024a). SR 25 does not provide views to, nor is it visible from, the project alignment area. There are not any project components that would be visible from a designated or eligible state scenic highway. Therefore, the project would have **no impact** on scenic resources in a designated state scenic highway.

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

The analysis below includes a description of the visual changes associated with the project and an evaluation of potential visual effects on key public views, primarily as represented by the set of four key observation points (KOPs) provided in the Visual Resources Technical Report prepared for the project (Appendix C), along with corresponding visual simulations from project buildout. KOP locations are depicted in Figure 3.1-3 and photographs from each viewpoint along with their corresponding visual simulations are depicted in Figures 3.1-3a through 3.1-3d. The proposed project is in a non-urbanized area; therefore, this impact would be significant if the project would substantially degrade the existing visual character or quality of public views of the site and its surroundings. Degradation is considered in terms of the degree of visual change. Key factors in determining the degree of visual change are visual contrast, project dominance, and view blockage brought about by project elements. Visual contrast is a measure of the degree of change in line, form, color, and texture that the project would create when compared to the existing landscape. Project dominance is a measure of the project element's apparent size relative to other visible landscape features in the viewshed. View blockage is a measure of the degree to which project elements would obstruct or block views to landscape features established by the project's position or scale.

The significance or degree of visual impact is determined based on an evaluation of visual change in relation to visual sensitivity factors, including the visual quality of the landscape, number and types of viewers, and degree of exposure of viewers. Described below are the changes in visual quality or character of each KOP including existing conditions, temporary and permanent construction, and operation and maintenance activities.

LSPGC and PG&E Project Components

Construction and Decommissioning

During construction and decommissioning, visual changes would include the presence of workers, portable buildings, construction equipment, and vehicles. To varying degrees, construction and decommissioning activities would be noticeable to motorists and the few local residents along the project alignment area. Residences generally are isolated, scattered, and for the most part, surrounded to varying degrees by mature vegetation that would screen open views across the landscape. Motorists would have more open views of construction and decommissioning activities where the proposed route would cross local roadways and of the temporary staging areas that would be located along local roadways. During construction, 20- by 125-foot guard structures would be installed at 12 locations along the project alignment, as shown in Appendix A Figures 6 and 7. The guard structures would temporarily obstruct views to passing motorists along I-5. Although the guard structures would be used temporarily during construction for stringing over the roadway, they would result in visual impacts on existing views. However, given the speed that vehicles travel on I-5 near the project alignment, views would be disrupted for only a few seconds.

The majority of construction activities would be limited to locations set back from roadways. Importantly, the project would be located in an area where mechanized agricultural production activities occur, and these activities typically employ the use of trucks and other equipment similar to that of the proposed project's construction equipment. Agricultural activities also result in ground disturbance and dust generation that would appear similar to the proposed project. Therefore, construction- and decommissioning-related visual impacts from the proposed project

would not substantially degrade the existing visual character or quality of the site and its surroundings. Additionally, construction and decommissioning of the project would be linear along the project alignment and would not occur at any given location for an extended period of time; therefore, impacts on views would be temporary.

Implementation of APMs and CMs

Implementation of LSPGC APM AES-1 would require construction staging, material storage, and work areas to be located away from public views wherever possible and temporary nighttime lighting to be shielded and directed away from residential areas. In addition, all LSPGC project component areas that would be temporarily disturbed by construction would be restored as close to pre-construction conditions as feasible following the completion of construction. In accordance with LSPGC APM AIR-2 and PG&E CM AIR-2, measures to control fugitive dust emissions would be implemented during construction, which would reduce visual changes.

Furthermore, implementation of LSPGC APM GEO-1 and PG&E CM GEN-1 require that temporarily disturbed areas following construction be recontoured to match pre-construction grades and vegetation removal and soil disturbance be limited to only the areas needed for construction.

Operation and Maintenance

The visual resources technical report, provided in Appendix C, evaluates the visual changes that would occur from implementation of the project using the standards of quality, consistency, and symmetry typically used for a visual assessment. This assessment is based on a review of maps, site photographs, aerial photographs, and proposed project-specific technical drawings. Analysis of the impacts on existing visual resources from implementing the project is based on evaluating the extent and implications of the visual changes and considering the following factors:

- ▶ specific changes to the visual character, and specifically valued qualities of the affected environment;
- ▶ visual context of the affected environment; and
- ▶ number of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by proposed project actions.



Source: Adapted by Ascent in 2024.

Figure 3.1-3 Key Observation Point Location



Source: Insignia Environmental, Inc. photograph taken by Arcadis in 2024.

KOP 1 - Existing View (looking southwest).



Source: Insignia Environmental, Inc. photograph taken by Arcadis in 2024.

KOP 1 - Simulated View (looking southwest).

Figure 3.1-3a KOP 1



Source: Insignia Environmental, Inc. photograph taken by Arcadis in 2024.

KOP 2 - Existing View (looking northwest).



Source: Insignia Environmental, Inc., photograph taken by Arcadis in 2024.

KOP 2 - Simulated View (looking northwest).

Figure 3.1-3b KOP 2



Source: Insignia Environmental, Inc., photograph taken by Arcadis in 2024.

KOP 3 - Existing View (looking south).



Source: Insignia Environmental, Inc., photograph taken by Arcadis in 2024.

KOP 3 - Simulated View (looking south).

Figure 3.1-3c KOP 3



Source: Insignia Environmental, Inc., photograph taken by Arcadis in 2024.

KOP 4 - Existing View (looking northwest).



Source: Insignia Environmental, Inc., photograph taken by Arcadis in 2024.

KOP 4 - Simulated View (looking northwest)

Figure 3.1-3d KOP 4

Representative KOPs

KOP 1: LSPGC Manning Substation Site

The existing view from KOP 1 consists of arid bare soil with foothills in the background and transmission towers that align horizontally across the middleground. See Figure 3.1-3a, Existing View. While the view of the foothills in the background is a harmonious view, the foreground lacks interest or natural variation in the landscape. The landscape is somewhat typical of the project alignment area and contains moderately low visual quality as it lacks interesting or pleasing significant manmade or natural features. Viewers consist of landowners, agricultural workers, and a single-family residence. Existing viewer sensitivity and visual quality rating are low to moderate.

Proposed project components visible from KOP 1 would consist of the proposed PG&E 230 kV transmission structures (tubular steel poles [TSPs]), 55 to 180 feet in height; PG&E 500 kV transmission structures (LSTs) between 100 and 199 feet in height; and the proposed Manning Substation. A variety of new steel structures would be visible, including single poles, groups of single poles in close proximity to each other, LSTs, and H-frame structures constructed from pairs of poles with a horizontal crossarm located near the top of the H-frame structure. See Figure 3.1-3a, Simulated View. The new steel poles and structures to be constructed within the proposed Manning Substation would be comprised of dulled-gray galvanized steel. In addition, the substation site would be surrounded by a 10-foot prefabricated interlocking security wall with 1 foot of barbed wire on top.

The visual quality of KOP 1 would be degraded by the dominance of the proposed Manning Substation within the view. The new steel poles would be more noticeable in the landscape than the existing LSTs seen in the midground, and the density of the new LSTs would create a visual barrier between the viewer and the foothills. See Figure 3.1-3a, Simulated View. The poles and substation infrastructure would also exceed the height of the foothills from this vantage point, overpowering an otherwise dominant landscape feature. Overall, the introduction of the Manning Substation would reduce the natural harmony and coherence by introducing infrastructure into a perceived semi-natural landscape. However, the introduction of the substation would represent an incremental change to the visual setting that already includes existing electrical infrastructure throughout the area. Given the relatively small number of viewers and the existing service lines, the overall visual sensitivity of this area is considered low to moderate, and the degradation of views attributable to the proposed project would not be substantial.

KOP 2: Interstate 5 Crossing

The existing view from I-5 is average as it relates to the degree of visual quality, containing common and typical landscapes for this area. See Figure 3.1-3b, Existing View. KOP 2 lacks significant natural or cultural features of interest. The foothills in the background are attractive, however the flat arid terrain directly adjacent to the highway is neither memorable nor visually pleasing. Levels of natural harmony and proposed project coherence are average. Existing viewer sensitivity and visual quality rating are moderate.

Proposed project components visible from KOP 2 would include steel poles. All new steel poles that would be visible are single poles, each supporting six conductors and optical ground wire strung from the top of each pole. See Figure 3.1-3b, Simulated View. The steel poles would be constructed of dulled-gray galvanized steel. The project would add industrial elements to the background along the horizon of this viewpoint, where the proposed transmission line would cross I-5. The new poles and lines would be highly visible and would change the view measurably from this vantage point. From further distances, the visibility of the new poles and lines would decrease. Because the poles and lines would be a new feature at this location, and there are no existing transmission lines in view, motorists could be sensitive to the change. However, motorists along I-5 could reasonably be assumed to be traveling at speeds of 60 to 80 miles per hour along this route and the duration of view, or visual exposure, would be brief, and visual sensitivity for these receptors would be moderately low to moderate. Therefore, the proposed project would not substantially degrade views.

KOP 3: West Manning Avenue

The existing view of KOP 3 shows agricultural fields in active production in the foreground and middleground, existing energy infrastructure in the middleground, and foothills in the background, as shown in Figure 3.1-3c, Existing View. The view is one of the more attractive (above average) landscapes in the area but is not a high quality

or exceptional view. There is an overall natural composition to the landscape with the blend of colors and rugged line of the foothills. Viewers consist of local motorists along West Manning Avenue. Existing viewer sensitivity and visual quality rating are moderate to moderately high.

Proposed project components visible from KOP 3 would include new TSPs. All new visible TSPs would be single poles, each supporting six conductors and optical ground wire strung from the top of each pole. See Figure 3.1-3c, Simulated View. The new steel poles would be constructed of dulled-gray galvanized steel. Although the steel poles would be visible, due to the distance from the road and the presence of existing electrical infrastructure (including poles and lattice towers), the steel poles would not degrade existing views. Overall, the introduction of the project elements would represent an incremental change to the visual setting that includes existing electrical infrastructure in the middleground. As a result of the remote nature of this area and distance from viewers, project components would be noticeable but largely incremental and would not substantially alter or degrade the existing visual character of the landscape in this area.

KOP 4: West Dinuba Avenue

The existing view features at KOP 4 include arid bare soil in foreground, existing electrical infrastructure (lattice steel towers and conductor) in the foreground and middleground, and foothills in the background. See Figure 3.1-3d, Existing View. The foothills appear as a far off, distant view and are not as prominent from this vantage point as they are in other parts of the project alignment area. The view lacks natural harmony or elements of cultural interest that a viewer would find attractive. Therefore, the view is moderately low quality. Due to the exceptionally rural nature of KOP 4, viewers, which consist of landowners, agricultural workers, and residents, are limited, which results in moderately low viewer sensitivity. Furthermore, KOP 4 lacks significant natural or cultural features of interest.

Proposed project components visible from KOP 4 would include new TSPs, which would replace the existing lattice steel towers. All new visible TSPs would consist of single poles located in close proximity to each other. See Figure 3.1-3d, Simulated View. The new steel poles would be constructed of dulled-gray galvanized steel. The view would be impacted by the addition of new TSPs and conductor and optical ground wire in the foreground. These project elements would be perceivable but would appear to be coherent with the existing landscape elements, which include transmission towers. The additional TSPs would be vertical in contrast to the horizontal landscape, which would reduce the project coherence and therefore the visual quality. However, because the existing view is moderate to low quality, the viewer sensitivity is moderately low, and the project would be installing additional electrical infrastructure with a view that currently contains similar infrastructure, the project would not substantially alter or degrade the existing visual character of the landscape in this area.

Summary of KOPs

As discussed above and presented in Figures 3.1-3a through 3.1-3d, while the construction of the LSPGC and PG&E project components would result in visual changes that would be noticeable to varying degrees, overall, the installation of the proposed project would not substantially degrade the existing visual character or quality of public views in nonurbanized areas. Based on viewer response and duration of views, overall sensitivity levels are different depending on the viewer group. Given the short duration of views and the transience of most viewers, motorists' viewer sensitivity is considered low to moderate. With their focus on work tasks while in the project area, workers' viewer sensitivity is considered low. With consideration given to viewer groups, activities, and perception-modifying factors, such as motorist speed, viewing duration, viewer orientation, viewer occupation, and the existing visual quality, operation of the project would not substantially degrade existing views.

Maintenance

Along the proposed LSPGC and PG&E transmission lines, maintenance activities, including routine inspections and emergency repair, would require the periodic short-term use of vehicles and equipment that could be visible to the public. These activities would occur primarily on agricultural land at varying distances from roadways in areas where mechanized agricultural production activities typically employ the use of trucks and other equipment that is similar to maintenance equipment. Maintenance would include activities such as repairing conductors, replacing insulators, repairing or replacing other hardware components, tree trimming, brush and weed control, and access road maintenance. Currently, PG&E already performs such maintenance activities in this area to service their existing lines

and maintenance of the project would be incorporated into their existing activities resulting in no additional visual impacts. Maintenance of the Manning Substation would occur a few times a year with a small crew of up to four employees. Such maintenance activities would require vehicles to access the site and negligible visual changes as equipment is maintained. Given the existing presence of mechanized agricultural activities and the limited number of affected viewers surrounding the project alignment area, these short-term maintenance activities would not substantially degrade the existing visual character of the landscape.

Conclusion

Construction, decommissioning, and operation and maintenance of the project would be largely visually consistent and compatible with existing uses and infrastructure surrounding the project alignment area and would not be located in areas of high viewer sensitivity. Implementation of APMs AES-1 and GEO-1 and CM GEN-1 would further reduce visual impacts during construction by requiring construction staging, material storage, and work areas to be located away from public view wherever possible, and following decommissioning, temporarily disturbed areas would be returned as close as possible to pre-project conditions with contours and revegetation. In addition, in accordance with APM AIR-2 and CM AIR-2, measures to control fugitive dust emissions would be implemented during construction, and soil and loose material be covered with tarps to reduce visual changes attributable to dust. Proposed project components would be moderately to highly visible and generally compatible with the existing visual quality and character of the surrounding area, and therefore would result in partial degradation of existing views. However, given the transience of most viewers (i.e., motorists along I-5) and the short duration of views depending upon the travel route, as well as the moderately low visual quality of the existing landscape, viewer sensitivity is considered low to moderate. Therefore, impacts would be **less than significant**.

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

LSPGC and PG&E Project Components

Construction

The project alignment area is predominantly situated in a rural setting where lighting sources tend to be localized and associated with agricultural processing facilities, residences, and some roadway intersections. Construction activities associated with the project would not create a new source of light that would adversely affect day views in the area. Most construction would occur during daylight hours. However, some construction activities for concrete pours, delivery of TSPs, and stringing transmission lines over I-5, may be required or finished at night. Such nighttime work would require lighting for safety. In such situations, portable temporary lighting would be used and directed exclusively to on-site locations and used to illuminate the immediate work area. Downward-directed lighting would reduce short-term light sources on any nearby residences and vehicles driving on I-5. Glare from construction equipment could occur depending on the time of day and the position of a viewer relative to the construction equipment; however, such glare would be transient and brief.

Implementation of APMs and CMs

Implementation of APM AES-1 would require LSPGC project component construction staging, material storage, and work areas to be located away from public view wherever possible and temporary nighttime lighting would be shielded and directed away from residential areas. In addition, all areas that would be temporarily disturbed by construction would be restored to conditions as close to pre-construction as feasible following the completion of construction. In accordance with LSPGC APM BIO-14 and PG&E CM GEN-1, temporary outdoor construction lighting would be directed on-site and away from potentially sensitive receptors and would include shields to prevent light spillover effects. In addition, APM BIO-14 would require photocell-controlled lighting (i.e., motion detection) be provided at a level sufficient to provide safe entry and exit to the LSPGC substation site during construction.

Operation and Maintenance

Glare occurs when a high degree of contrast is evident between bright and dark areas in a field of view, making it difficult for the human eye to adjust to differences in brightness. Nonspecular conductors for the transmission lines

and nonreflective insulators at the proposed substation site would be installed as part of the project. The proposed transmission structures would be assembled from nonreflective dulled-gray galvanized steel, thus reducing glare. The structures and equipment to be installed at the Manning Substation would have nonreflective finishes and neutral earth-tone colors. These design features would minimize the potential effect of glare.

Project features, including the LSPGC 230 kV transmission line, PG&E 230 kV and 500 kV Interconnections, PG&E 230 kV Reconductoring, and all structure raises, would not include lighting. Therefore, all project components except the Manning Substation would not create any new sources of light.

Lighting would be installed at the proposed Manning Substation and would conform to National Electric Safety Code (NESC) requirements and other applicable outdoor lighting codes. The facility would not require 24-hour illumination. Motion detection lighting would be used to provide safety lighting for entry to and exit from the Manning Substation and control equipment enclosure. Additional manually controlled lighting would be provided to create safe working conditions at the Manning Substation, allowing employees to turn on additional lighting when needed. Furthermore, light fixtures would be located near major outdoor equipment, general substation areas, and building exteriors. Lights would be mounted on structures, poles, and supplementary buildings as required and would be motion sensor-activated to avoid any unnecessary use or potential disturbance.

Operation of the Manning Substation would be remotely monitored. Quarterly maintenance of the Manning Substation would usually occur during the daytime. Nighttime maintenance activities are not expected to occur more than once per year. Nighttime lighting used for maintenance would be shielded and directed to prevent light escape. Operation and maintenance of the LSPGC 230 kV transmission line and PG&E project components would not occur during nighttime hours and would thus not require lighting.

Conclusion

The potential for light-related impacts from the project would be minimal because there would be no lighting along the transmission lines. Minimal nighttime lighting at the Manning Substation would be operated and used for security purposes only. APMs AES-1 and BIO-14 and CM GEN-1 are design features that would require the use of nonreflective surfaces and directional lighting with shielded and cutoff-type light fixtures; implementation of these measures would minimize glare, as well as light spillage and skyglow, during construction. The project would not create any new source of substantial light or glare that would adversely affect day or nighttime views in the area. Therefore, this impact would be **less than significant**.

3.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
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 checked="" type="checkbox"/>	<input 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

REGIONAL SETTING

The proposed project site is located in Fresno County, the second largest agricultural county in California (CDFA 2021). The county is located in the Central Valley, which is known as California's heartland for farm production. The main crops in Fresno County include commodities such as grapes, pistachios, and oranges that support an annual production value of over 8 billion dollars (CDFA 2021).

AGRICULTURAL RESOURCES

The project alignment area within unincorporated Fresno County traverses land used for the production of crops. The project alignment area crosses agricultural lands that are used for orchard farming, cattle grazing, and hay cultivation.

IMPORTANT FARMLAND

Public Resources Code (PRC) Section 21060.1 defines "agricultural land" as land categorized by the California Department of Conservation (CDOC) as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. These designations are collectively referred to as Important Farmland and defined as follows:

- ▶ **Prime Farmland:** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- ▶ **Farmland of Statewide Importance:** Farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- ▶ **Unique Farmland:** Farmland of lesser 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.

Figure 3.2-1 depicts areas of Important Farmland within 0.5 miles of the project components. Table 3.2-1 quantifies the distance or area of the project alignment that would cross Important Farmland. Portions of the project alignment would be located on land designated as Farmland of Local Importance, which the CDOC defines as land of importance to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee. Fresno County does not consider Farmland of Local Importance as Important Farmland (Fresno County 2000). Therefore, Farmland of Local Importance is not included as part of this analysis.

Table 3.2-1 Important Farmland Crossed by the Project Alignment

Project Component	FMMP Category	Approximate Distance or Area Crossed by the Project Alignment
LSPGC 230 kV Transmission Line	Prime Farmland	5.6 miles
	Farmland of Statewide Importance	2.0 miles
PG&E 230 kV Interconnections	Prime Farmland	5.0 miles
PG&E 230 kV Reconductoring	Prime Farmland	3.2 miles
	Farmland of Statewide Importance	2.0 miles
PG&E 230 kV and 115 kV Structure Raises	Prime Farmland	< 0.01 acre
PG&E Panoche Substation Interconnection Modifications	Prime Farmland	< 0.01 acre

Notes: FMMP = Farmland Mapping and Monitoring Program. The approximate distances of the LSPGC 230 kV transmission line and PG&E 230 kV Reconductoring encompass the overall lengths of the respective transmission line corridors that would cross Important Farmland. The approximate distances crossed by the proposed PG&E 230 kV Interconnections reflect the sum of the lengths of all lines in the interconnections that would cross farmland.

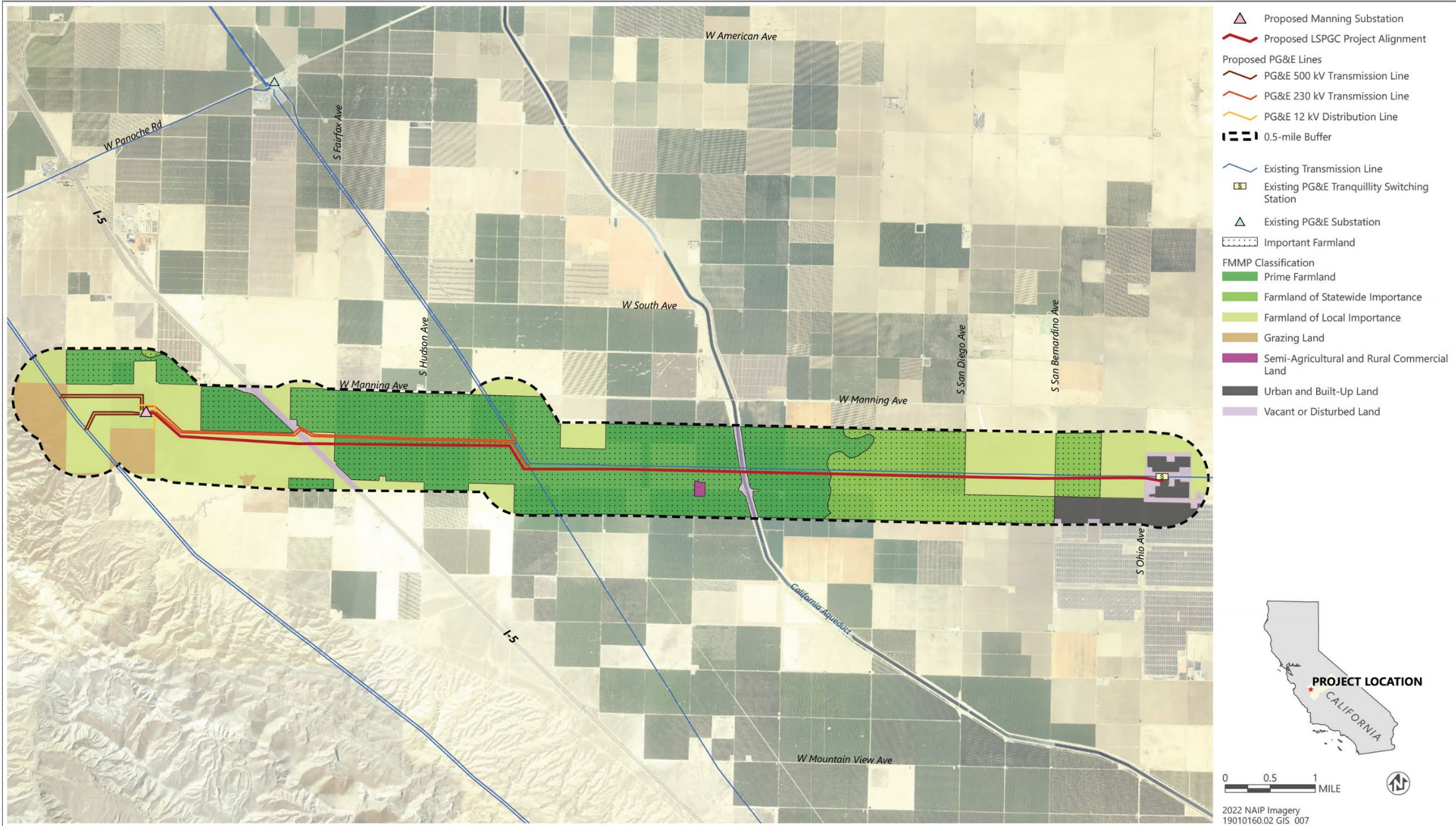
Source: CDOC 2024a.

WILLIAMSON ACT CONTRACT

Figure 3.2-2 depicts parcels under Williamson Act contracts (described in Section 3.2.2, “Regulatory Setting”) that intersect with or are within 0.5 miles of the proposed project components. As shown on Figure 3.2-2, the 40 acre Manning Substation site and the approximately 0.7 mile PG&E 500 kV Interconnections extending west from the Manning Substation would be located on parcels under active Williamson Act contract. Approximately 9.7 miles of the proposed LSPGC 230 kV transmission line and 6.3 miles of the proposed PG&E 230 kV Interconnections would cross parcels under active Williamson Act contracts. Approximately 6 miles of the proposed PG&E 230 kV Reconductoring would cross parcels under active Williamson Act contracts. All other project components are not located on active Williamson Act contract land.

AGRICULTURAL GENERAL PLAN LAND USE AND ZONING DESIGNATIONS

Fresno County designates agricultural land uses and zoning within its jurisdiction. Figure 3.2-3 depicts land zoned as agricultural within 0.5 miles of the project alignment. Within Fresno County, the project alignment would be located on lands zoned as Exclusive Agriculture, 20-acre minimum lot size (AE-20) and Exclusive Agriculture, 40-acre minimum lot size (AE-40). The AE zone is intended to be an exclusive zone for agricultural uses and for uses that are necessary and an integral part of agricultural operation (Fresno County 2018). Pursuant to Section 816.2 of the Fresno County Zoning Ordinance, electrical transmission substations and electrical distribution substations are permitted on parcels zoned AE.



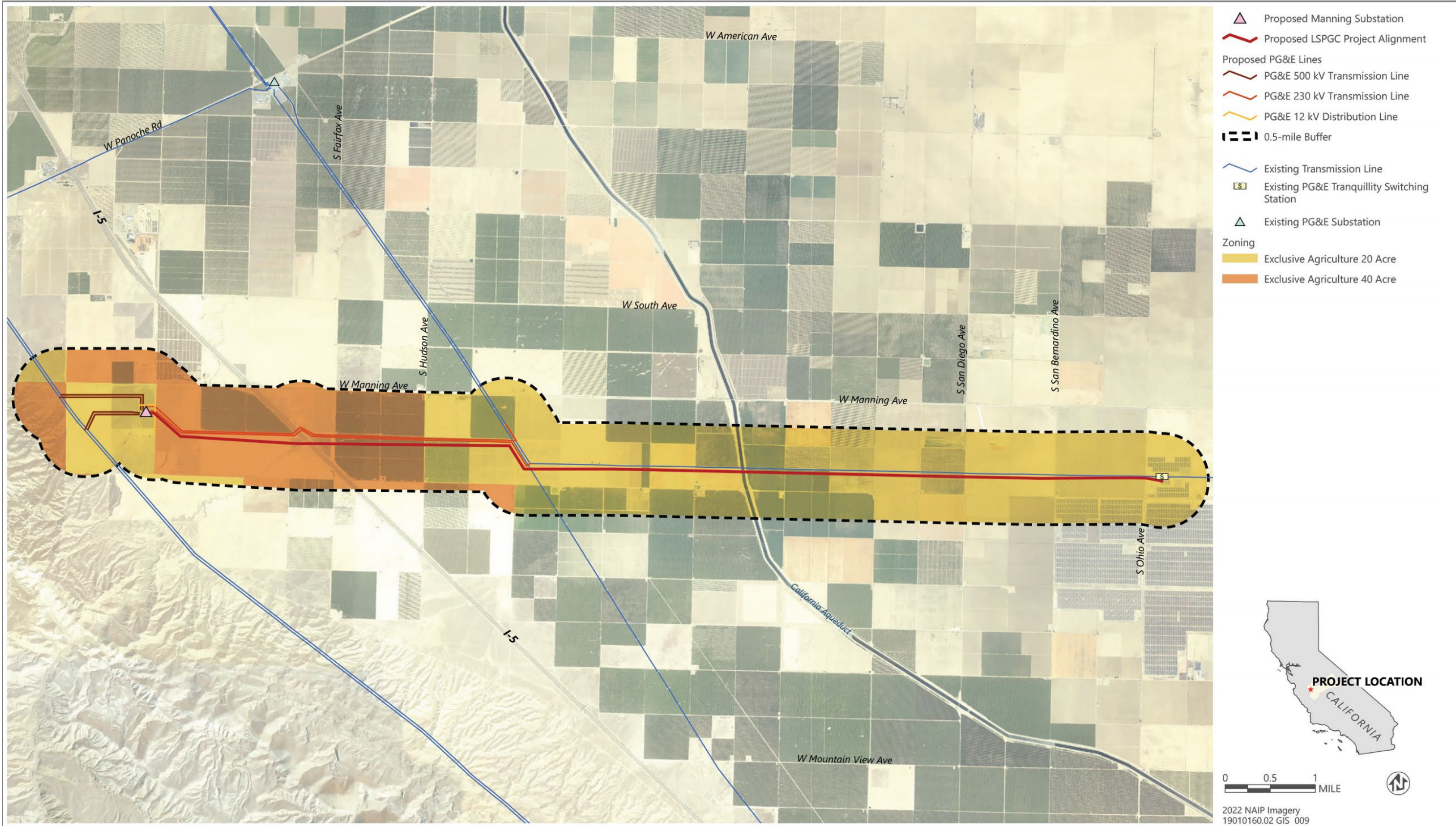
Source: Adapted by Ascent in 2024.

Figure 3.2-1 Important Farmland



Source: Adapted by Ascent in 2024.

Figure 3.2-2 Williamson Act Contract Lands



Source: Adapted by Ascent in 2024.

Figure 3.2-3 Fresno County Zoning

3.2.2 Regulatory Setting

STATE

Farmland Mapping and Monitoring Program

The CDOC established the Farmland Mapping and Monitoring Program (FMMP) in 1982 as a nonregulatory program to provide a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP now maps agricultural and urban land use for nearly 98 percent of the state's privately held land. The California Important Farmland Map created by the FMMP is a composite of land use data and U.S. Department of Agriculture (USDA) data on soil type. Land use is established by the FMMP through aerial photograph interpretation. The minimum area mapped by the FMMP is 10 acres; land uses that occur in areas smaller than 10 acres are aggregated with the most appropriate adjacent land use category. The FMMP rates and classifies agricultural land according to soil quality, irrigation status, and other criteria. Important Farmland categories are Prime Farmland, Farmland of Statewide Importance, and Unique Farmland and are defined above in Section 3.2.1, "Environmental Setting" (CDOC 2024b).

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) is designed to preserve agricultural and open space land. The Williamson Act establishes a program of contracts with private landowners who voluntarily restrict their land to agricultural and open space uses. The program is a two-step process involving the establishment of an agricultural preserve by the local legislative body and then approval of a land conservation contract. In return, owners of Williamson Act parcels receive a lower property tax rate consistent with the land's actual use instead of its market value. Lands under contract may also support uses that are "compatible with the agricultural, recreational, or open-space use of [the] land" subject to the contract (California Government Code Section 51201[e]).

Government Code Section 51290 states that "(a) it is the policy of the state to avoid, whenever practicable, the location of any federal, state, or local public improvements and any improvements of public utilities, and the acquisition of land therefor, in agricultural preserves," and "(b) it is further the policy of the state that whenever it is necessary to locate such an improvement within an agricultural preserve, the improvement shall, whenever practicable, be located upon land other than land under a contract pursuant to this chapter." However, Section 51293 states that "the location or construction of any public utility improvement which has been approved by the Public Utilities Commission" is exempt from the requirement of preventing the placement of public improvements within Williamson Act contract lands.

California Government Code Section 51222 states 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." Pursuant to this section, agricultural land is 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 that is not prime agricultural land."

California Government Code Section 51238 states that "the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are determined to be compatible uses within any agricultural preserve." This section further states that "no land occupied by gas, electric, water, communication, or agricultural laborer housing facilities shall be excluded from an agricultural preserve by reason of that use."

California Farmland Conservancy Program

The California Farmland Conservancy Program was established under PRC Sections 10200–10277 to promote the long-term preservation of agricultural lands in California through the use of agricultural conservation easements. In addition to funding provided for agricultural easement acquisition, California Farmland Conservancy Program grant funds are available for projects that develop policy or planning oriented to agricultural land protection, and for improvements to land already under an agricultural conservation easement (e.g., erosion control, riparian area

improvements). The program is authorized to accept donations from private entities if the CDOC is the designated beneficiary of the donation and it uses the funds for purposes of the program in a county specified by the donor (PRC Section 10231.5).

LOCAL

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. 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 county regulations are not applicable as Fresno County does not have jurisdiction over the project. However, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Agriculture and Land Use Element of the *Fresno County General Plan* (Fresno County 2000) contains the following policies related to agricultural resources that are relevant to the project:

- ▶ **Policy LU-A.13:** The County shall protect agricultural operations from conflicts with non-agricultural 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.

Fresno County Zoning Ordinance

Chapter 816 of the Fresno County Zoning Ordinance provides land uses permitted on each parcel throughout the county. As described in Section 3.2.2, "Regulatory Setting" the project alignment would transverse lands zoned as AE-20 and AE-40. Pursuant to Section 816.2 of the Fresno County Zoning Ordinance, electrical transmission substations and electrical distribution substations are permitted on parcels zoned AE.

3.2.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to agricultural resources.

LSPGC APMs

- ▶ **APM AG-1: Landowner Coordination.** LS Power Grid California, LLC (LSPGC) will coordinate with landowners prior to construction and during restoration efforts. Measures to be implemented may include, but are not limited to, the following
 - Provide notice to landowners outlining construction activities and restoration efforts.
 - Restore areas disturbed by construction of the project in accordance with lease agreements, applicable operation and maintenance (O&M) standards, and environmental permit requirements.

In areas containing permanent crops (e.g., grapevines or orchard crops) that must be removed to gain access to pole sites for construction purposes, LSPGC may provide compensation to the farmer and/or landowner in coordination with the landowner.

PG&E CMs

- ▶ **CM AG-1: Landowner Coordination.** Pacific Gas and Electric Company (PG&E) will coordinate with landowners prior to construction and during restoration efforts. Measures to be implemented may include, but are not limited to, the following:
 - Provide notice to landowners outlining construction activities and restoration efforts.
 - Areas disturbed by construction of the project restored in accordance with lease and easement conditions, applicable operation and maintenance standards, and environmental permit requirements.
 - In areas containing permanent crops (i.e., grapevines, orchard crops, etc.) that must be removed to gain access to pole sites for construction purposes, PG&E may compensate the farmer and/or landowner in coordination with the landowner.

3.2.4 Discussion

- 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?**

LSPGC and PG&E Project Components

Construction

As shown in Figure 3.2-1, the LSPGC and PG&E project components would occur partially on Important Farmland. The use of pulling sites, temporary access roads, staging areas, and workspaces for construction of the LSPGC 230 kV transmission line, PG&E 230 kV Interconnections, 230 kV Reconductoring, 230 kV and 115 kV Structure Raises, and Panoche Interconnection Substation Modifications would result in temporary impacts on Prime Farmland and Farmland of Statewide Importance as shown in Table 3.2-2. Most temporary work areas around LSPGC and PG&E structures would be parallel or adjacent to agricultural or county roads. Consequently, most work areas would be accessed directly from adjacent roads. Most of the existing paved and unpaved roads in the project vicinity are currently used for large agricultural vehicle and equipment movement during field preparation, planting, maintenance, and harvesting. As described in Chapter 2, "Project Description," approximately 6.8 acres of orchards would be removed for the project to establish temporary work areas and access. LSPGC easements would be required between property owners, LSPGC, and/or PG&E allowing LSPGC and PG&E to construct, operate, and maintain the new infrastructure. Upon completion of construction activities, all areas of temporary ground disturbance would be returned to pre-construction condition, unless otherwise requested by the landowners.

Because temporarily impacted farmland would be restored after construction, construction activities would not result in the conversion of Important Farmland to nonagricultural use.

Table 3.2-2 Temporary Impacts on Important Farmland

Project Component	Important Farmland Designation	Total Approximate Acreage within Temporary Work Areas and Access Roads	LSPGC Acreage within Temporary Work Areas and Access Roads	PG&E Acreage within Temporary Work Areas and Access Roads
Pulling Site	Prime Farmland	25.2	7.9	17.3
	Farmland of Statewide Importance	2.8	2.8	0
Staging Area ¹	Prime Farmland	59.7	59.7	0
	Farmland of Statewide Importance	96.8	96.8	0
Structure Work Area	Prime Farmland	43.9	15.9	28.0
	Farmland of Statewide Importance	10.0 acres	5.5	4.5
Temporary Access Road	Prime Farmland	3.6 acres	1.2	2.4
	Farmland of Statewide Importance	3.3 acres	3.3	0
Total Important Farmland		245.2 acres	193	52.2

Note: Numbers may not add due to rounding.

¹ Use of staging areas would be shared by LSPGC and PG&E, but all staging-area acreage is shown under LSPGC.

Source: Calculated by Ascent in 2024.

Operation and Maintenance

The LSPGC project components would result in permanent conversion of approximately 1.18 acres of Important Farmland through installation of TSPs to support the proposed LSPGC 230 kV transmission line and permanent access roads. The PG&E project components would result in permanent conversion of approximately 0.51 acres of Important Farmland through installation of a permanent access road and improvements to an existing access road to support the PG&E 230 kV Interconnections and Reconductoring. This would result in permanent conversion of approximately 1.69 total acres of Important Farmland to nonagricultural uses associated with electrical infrastructure. See Table 3.2-3. Agricultural operations in the vicinity of overhead distribution lines and TSPs, such as the movement of farm equipment and aerial application of pesticides, may be restricted by the project. However, the presence of this utility infrastructure would not prevent the ongoing use of any individual property for agricultural purposes. The conversion of Important Farmland to non-agricultural use would be considered significant if the project reduces a mapping unit of Important Farmland to less than 10 acres. Pursuant to California Government Code Section 51222, agricultural land is 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 that is not prime agricultural land." The California Important Farmland Map employs 10 acres as the minimum mapping unit, with features smaller than 10 acres absorbed into the surrounding classifications. Therefore, parcels that fall below this threshold may lose the Farmland designation at the next biennial update. The conversion of Important Farmland for project components would be distributed over 32 parcels, ranging from 0.01 to 0.32 acres of conversion per parcel. As shown in Table 3.2-4, the project would not result in the conversion of agricultural land such that the Important Farmland within any impacted parcel would become less than 10 acres such that it could no longer be considered or mapped as Important Farmland by the CDOC. No individual mapping unit of Important Farmland would be reduced to less than 10 acres such that it could no longer be considered or mapped as Important Farmland by the CDOC.

As noted above, LSPGC easements would be required between property owners and LSPGC, allowing LSPGC to construct, operate, and maintain the new infrastructure. PG&E currently performs operation and maintenance activities on its existing transmission lines and substations in the project vicinity. New PG&E easements would be required between property owners and PG&E, allowing PG&E to construct, operate, and maintain the new infrastructure. Where possible, existing access roads would be used for maintenance of the project components, which would occur infrequently as needed. Maintenance access through active agricultural areas would occur on a limited basis because the proposed transmission line components would require infrequent ground-based inspection. Therefore, operation of the project would not convert Important Farmland to non-agricultural use.

Table 3.2-3 Permanent Impacts on Important Farmland

Important Farmland Designation	Total Approximate Acreage of Permanent Impact	LSPGC Project Component Acres	PG&E Project Component Acres
Prime Farmland	0.77 acres (permanent access road)	0.27	0.508
	0.002 acres (permanent access road improvements)	0	0.002
	0.77 acres (structure area/pole footprint)	0.77	0
Farmland of Statewide Importance	0.14 acres (structure area/pole footprint)	0.14	0
Total Important Farmland	1.69 acres	1.18	0.51

Note: Numbers may not sum due to rounding.

Source: Calculated by Ascent in 2024.

Table 3.2-4 Remaining Farmland Per Parcel After Project Implementation

Assessor's Parcel Number	Existing Farmland Acreage	Permanent Project Impact (acres)	Farmland Acreage After Project Implementation
02717180S	200.9	0.17	200.7
02717181S	211.6	0.32	211.3
02717182S	208.8	0.15	208.7
02718086S	78.8	0.06	78.7
02809046S	81	0.01	81.0
02809066S	20	0.05	19.9
02721020S	100.9	<0.01	100.9
02721032S	30.2	<0.01	30.2
02717121S	149.9	0.03	149.9
02717180S	200.9	0.02	200.9
02717181S	211.6	0.04	211.6
02717182S	208.8	0.04	208.8
02718002S	163.4	0.04	163.4
02718007S	79.9	0.18	79.7
02718010S	81.4	0.01	81.4
02718061	154.6	0.03	154.6
02718066S	153.3	0.04	153.3
02718067	40.7	0.02	40.7
02718068	42	0.07	41.9
02718070	39.5	0.02	39.5
02718071S	40.2	0.01	40.2
02718072S	158.7	0.05	158.6
02718086S	78.8	0.02	78.8
02809046S	39.8	0.01	39.8
02809066S	90	0.02	90.0
02721020S	194.7	0.01	194.7
02721032S	76.1	0.01	76.1

Assessor's Parcel Number	Existing Farmland Acreage	Permanent Project Impact (acres)	Farmland Acreage After Project Implementation
02717121S	20	0.01	20.0
02717180S	294	0.04	294.0
02717181S	162.4	0.03	162.4
02717182S	592.5	0.07	592.4
02718002S	74	0.04	74.0
02718007S	200.9	0.17	200.7
02718010S	211.6	0.32	211.3
02718061	208.8	0.15	208.7
02718066S	78.8	0.06	78.7
02718067	81	0.01	81.0
02718068	20	0.05	19.9
02718070	100.9	<0.01	100.9
02718071S	30.2	<0.01	30.2
02718072S	149.9	0.03	149.9
02718086S	200.9	0.02	200.9
02809004S	211.6	0.04	211.6
02809046S	208.8	0.04	208.8
02809063S	163.4	0.04	163.4
02809064S	79.9	0.18	79.7
02809066S	81.4	0.01	81.4
02809075S	154.6	0.03	154.6
02809007S	153.3	0.04	153.3
02809077S	40.7	0.02	40.7
02810104S	42	0.07	41.9

Source: Calculated by Ascent in 2024.

Implementation of APMs and CMs

LSPGC would implement APM AG-1 and PG&E would implement CM AG-1 to minimize impacts on active agricultural areas. Specifically, under APM AG-1 and CM AG-1, LSPGC and PG&E would notify landowners of proposed project activities, coordinate with landowners to minimize construction-related disruptions, provide fair market compensation for the removal of crops or damaged infrastructure, and restore or provide compensation to landowners to restore agricultural land temporarily impacted by construction to pre-project conditions. In accordance with APM AG-1 and CM AG-1, included in Section 3.2.3, LSPGC and PG&E may provide agricultural landowners with fair market compensation for crops removed, crops unable to be harvested or replanted, lost planting cycles, damaged infrastructure, and restoration of impacted agriculture land during construction activities. Upon completion of construction of LSPGC and PG&E project components, all areas of temporary ground disturbance would be returned to pre-construction condition, unless otherwise requested by the landowners.

Conclusion

Temporary construction activities for the project would occur on approximately 245 acres of Important Farmland. LSPGC APM AG-1 and PG&E CM AG-1, described above, may provide agricultural landowners with fair market compensation for crops removed, crops unable to be harvested or replanted, lost planting cycles, damaged infrastructure, and restoration of agricultural land impacted by construction activities. Upon completion of

construction of the project, all areas of temporary ground disturbance would be returned to pre-construction condition, unless otherwise requested by the landowners.

Permanent project components, including new TSPs, LSTs, and access roads, would result in the removal of approximately 1.69 acres of existing agricultural crops and modifications to existing agricultural operations in the vicinity of overhead distribution lines, LSTs, and TSPs. However, the project would not prevent ongoing use of the properties for agricultural use. The conversion of Important Farmland to non-agricultural use would be considered significant if the project reduces a mapping unit of Important Farmland to less than 10 acres. The conversion of Important Farmland would be distributed over 32 parcels, ranging from less than 0.01 acres to 0.32 acres of conversion per parcel.

Absent implementation of APMs and CMs, because no individual mapping unit of Important Farmland would be reduced to less than 10 acres such that it could no longer be considered or mapped as Important Farmland by the CDOC, the project would not result in the conversion of Important Farmland to non-agricultural use; therefore, this impact would be **less than significant**.

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

Manning Substation

Zoning

As shown on Figure 3.2-3, the proposed Manning Substation would occur on land with agricultural zoning within unincorporated Fresno County. The substation site is zoned as AE-20. The Fresno County Zoning Ordinance permits electrical substations on parcels with an AE zoning designation provided the project would not be detrimental to the character of development in the immediate neighborhood or the public health, safety, and general welfare and consistent with the General Plan (Fresno County 2024). As discussed in Section 3.11, "Land Use and Planning," the proposed project is consistent with the finding criteria (i.e., that the substation site is adequate in size and shape to accommodate all features needed, and the substation would not be detrimental to the character of development in the immediate area). Therefore, because a substation is considered an allowable and compatible use with existing agricultural zoning, as discussed in Section 3.11, the project would not change the designation of any land from an agricultural to a non-agricultural use, and the proposed Manning Substation would not conflict with Fresno County's AE zoning.

Williamson Act Contract

As shown on Figure 3.2-2, the substation site would occur on a parcel under Williamson Act contract. LSPGC would purchase approximately 40 acres of the 160-acre parcel to construct the Manning Substation. The remaining 120 acres would remain under Williamson Act contract. Under the Williamson Act, conflicts with parcels under contract can be avoided in four ways. One of the four ways to cancel a Williamson Act contract is by eminent domain. According to the statute, when a public entity files an eminent domain action, or eminent domain in lieu, any underlying Williamson Act contract is automatically deemed null and void.

The Williamson Act contract for the 40-acre substation site would be canceled through eminent domain in lieu where LSPGC would acquire the land in lieu of eminent domain for a public improvement. Through this action, the Williamson Act contract would automatically be deemed null and void.

The Williamson Act states that agricultural parcels would be large enough to sustain their agriculture use if the land is at least 10 acres of prime agricultural land or at least 40 acres of nonprime agricultural land (California Government Code Section 51222). As shown in Figure 3.2-2, the parcel for the substation site is not prime agricultural land and, with implementation of the project, approximately 120 acres of the parcel would remain under Williamson Act contract and would be viable agricultural land. A parcel under Williamson Act contract can be modified to reflect the remaining contracted area, with the provisions of the original contract continuing to apply in the same manner as before the creation of a separate parcel. The remaining 120 acres under Williamson Act would continue to be cultivated. Placing the Manning Substation on the 40-acre parcel would not change the land use designation for the remaining 120 acres of the parcel or conflict with the underlying intent of the Williamson Act contract, which is to

preserve agricultural land in agricultural use. Removal of 40 acres of Williamson Act contract lands for the substation site would not disqualify the 120-acre parcel from maintaining a designation as agricultural preserve. Therefore, because only 40 acres would be removed from parcel to support the substation site and approximately 120 acres of the substation site would be preserved under the Williamson Act, the overall parcel would be able to maintain farming activities.

LSPGC 230 kV Transmission Line and PG&E Components

Zoning

As shown on Figure 3.2-3, the proposed LSPGC 230 kV transmission line, PG&E 500 kV Interconnections, PG&E 230 kV Interconnections, and PG&E 230 kV Reconductoring would be located on lands with agricultural zoning (AE-20 or AE-40) within unincorporated Fresno County. According to the Fresno County Zoning Ordinance, electrical transmission infrastructure is permitted in the AE zone district provided the project would not be detrimental to the character of development in the immediate neighborhood or the public health, safety, and general welfare and consistent with the General Plan (Fresno County 2024). As discussed in Section 3.11, “Land Use and Planning,” the proposed project is consistent with the finding criteria (i.e., that the PG&E project components would not be detrimental to the character of development in the project vicinity and are consistent with the Fresno County General Plan). Therefore, because electrical infrastructure is considered an allowable and compatible use with existing agricultural zoning, the project would not change the designation of any land from an agricultural to a non-agricultural use and the LSPGC 230 kV transmission line and PG&E project components would not conflict with Fresno County’s AE zoning.

Williamson Act Contract

As shown on Figure 3.2-2, the proposed LSPGC 230 kV transmission line, PG&E 500 kV Interconnections, PG&E 230 kV Interconnections, and PG&E 230 kV Reconductoring would cross parcels under Williamson Act contract. The PG&E 230 kV and 115 kV Structure Raises would occur on parcels under Williamson Act contract. During project construction, portions of land under Williamson Act contract would be taken out of production to accommodate LSPGC and PG&E construction activities, delivery and staging of construction materials, installation of poles and lines, and access for construction crews. Approximately 387.5 acres of Williamson Contract lands would be temporarily taken out of production during project construction, as shown in Table 3.2-5.

Table 3.2-5 Temporary Project Impacts on Williamson Act Contract Lands

Project Component	Number of Parcels Impacted	Total Approximate Temporary Impact Acreage	LSPGC Approximate Temporary Impact Acreage	PG&E Approximate Temporary Impact Acreage
Pulling Site	24	89.0	19.1	69.9
Landing Zone	1	0.9	0	0.9
Staging Area ¹	9	198.6	198.6	0
Structure Work Area	38	86.7	27.0	59.8
Temporary Access Road	32	12.3	9.7	2.6
Total Williamson Act Temporary Impacts		387.5	254.4	133.3

Note: Numbers may not sum due to rounding.

¹ Staging areas would be commonly used by LSPGC and PG&E and all acreage is shown under LSPGC.

Source: Calculated by Ascent in 2024.

Regarding permanent impacts, a total of 201 poles would be installed on land under Williamson Act contracts, which would be distributed over 33 different parcels. In addition, permanent access roads and permanent access road improvements would occur on approximately 1.6 acres of Williamson Act contract lands over 6 parcels. Of these parcels, LSPGC project component permanent impacts would occur on approximately 0.4 acres and PG&E permanent project components impacts would occur on approximately 1.2 acres. The potential land conversion on any individual

parcel would be less than a tenth of an acre. Although several parcels are below the minimum acreage requirements to enter into Williamson Act contracts, as specified in California Government Code Section 51222, these parcels may be combined with other parcels under the contract. No parcel that is large enough to meet the minimum acreage requirement to enter into a Williamson Act contract would be reduced to less than 10 acres for prime farmland or 40 acres for nonprime farmland as a result of the project. Additionally, according to Section 51238 of the Williamson Act the erection, construction, alteration, and maintenance of electric facilities are considered compatible uses for agriculture. Farmers may be required to modify existing agricultural operations, such as the movement of farm equipment and aerial application of pesticides, in the vicinity of overhead distribution lines, LSTs, and TSPs. However, the presence of this utility infrastructure would not prevent ongoing agricultural use of the properties under the Williamson Act. The minor reduction in size of the current Williamson Act parcels due to the TSPs and LSTs would not disqualify these parcels from maintaining their designation as agricultural preserves because the area of land taken out of production for any one parcel would be negligible.

Implementation of APMs and CMs

In accordance with LSPGC APM AG-1 and PG&E CM AG-1, LSPGC and PG&E may notify landowners of proposed project activities, coordinate with landowners to minimize construction-related disruptions, provide fair market compensation for the removal of crops or damaged infrastructure, and restore or provide compensation to landowners to restore agricultural land temporarily impacted by construction to pre-project conditions. These measures would further reduce impacts on Williamson Act parcels.

Conclusion

The project is not subject to local land use and zoning regulations. Regardless, the project would be considered a permitted use in areas with agricultural zoning in Fresno County. Therefore, the project would not conflict with existing zoning.

LSPGC APM AG-1 and PG&E CM AG-1, described above, may result in notification to nearby landowners of proposed project activities, coordination with landowners to minimize construction-related disruptions, fair market compensation for the removal of crops or damaged infrastructure, and restoration or compensation to landowners to restore agricultural land temporarily impacted by construction to pre-project conditions. However, absent of implementation of APMs and CMs approximately 3.3 acres of land enrolled in Williamson Act contracts would be permanently taken out of production to support the permanent access roads, TSPs, and LSTs, and 386 acres of land enrolled in Williamson Act contracts would be temporarily taken out of production to accommodate construction activities. Placing the Manning Substation on 40 acres of the 160-acre parcel would not change the land use designation for the remaining 120 acres of the parcel or conflict with the underlying intent of the Williamson Act contract, which is to preserve agricultural land in agricultural use. Because the 120-acres would remain in a designation as an agricultural preserve the project would preserve agricultural land. The land enrolled in Williamson Act contract that would be permanently taken out of production for installation of the project would be distributed over 33 different parcels. The area of land taken out of production for any one parcel would not prevent ongoing agricultural use of the parcels enrolled in Williamson Act contracts or preclude their continued enrollment in any Williamson Act contract. Therefore, this impact would be **less than significant**.

- 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])?**

LSPGC and PG&E Project Components

PRC Section 12220(g) 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. PRC Section 4526 defines "timberland" as land, other than land owned by the federal government and land designated by the board as experimental forest land, that is available for, and capable of, growing a crop of trees of a commercial

species used to produce lumber and other forest products, including Christmas trees. Timberland Production Zone is land that can be used for growing and harvesting timber and for compatible uses.

Fresno County does not contain any lands zoned for forest land, timberland, or timberland production. No project components would be constructed or operated on forest land, as defined in PRC Section 12220(g), or timberland, as defined in PRC Section 4526. Therefore, there would be **no impact** on forest land, timberland, or Timberland Production Zones.

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

Refer to the discussion under item "c." There would be **no impact**.

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?

LSPGC and PG&E Project Components

As discussed further in Section 3.14, "Population and Housing," the project would address electrical reliability and capacity issues to better serve existing and planned future customers in the area, including agricultural users, by preventing service interruptions and allowing customers to continue operating with a more reliable power source. The project does not propose new housing, businesses, or other land use changes, including the extension of roads or infrastructure to previously undeveloped areas. Therefore, the project would not induce population growth in the area that would accelerate the conversion of agricultural land to urban and built-up land. Project implementation would not discourage the continued use of adjacent land for agricultural use.

As described in Section 3.2.1, "Environmental Setting," Important Farmland is designated based on physical properties, including water supply, soil quality, and topography. The project would not involve any other changes to the physical environment, such as changes to soil quality or topography, that could result in conversion of Important Farmland to nonagricultural use. As indicated in the discussion above, the project would not involve changes in the existing environment that could result in the conversion of Important Farmland to nonagricultural use. Impacts would be **less than significant**.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on 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 checked="" type="checkbox"/>	<input 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

The project would be located in unincorporated areas of western Fresno County. The project alignment area is located in the San Joaquin Valley Air Basin (SJVAB). The SJVAB includes all of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, and Kings Counties, as well as part of Kern County. The existing air quality conditions in the SJVAB are determined by natural factors, such as topography, meteorology, and climate, as well as emissions released by existing air pollutant sources and the atmosphere's ability to transport and dilute those emissions.

CLIMATE, METEOROLOGY, AND TOPOGRAPHY

The SJVAB encompasses an area approximately 250 miles long that averages 35 miles wide and is shaped like a narrow bowl. The SJVAB is bordered by the Sierra Nevada mountains to the east (ranging from 8,000 to more than 14,000 feet in elevation), the Coast Ranges to the west (averaging 3,000 feet in elevation), and the Tehachapi Mountains to the south (6,000–7,981 feet in elevation). There is a slight downward elevation gradient from Bakersfield in the southeast end (408 feet in elevation) to sea level at the northwest end where the Central Valley opens to the San Francisco Bay at Carquinez Straits (SJVAPCD 2015). The SJVAB is in a Mediterranean climate zone. The SJVAB is typically arid in the summer; cool temperatures and tule fog (a dense ground fog) are prevalent in the winter and fall. Average high temperatures in the summer are in the mid-90 degrees Fahrenheit (°F) range; average low temperatures in winter are in the high 40°F range. January is typically the wettest month of the year, with an average of approximately 2 inches of rain. Wind direction typically is from the northwest with speeds up to 30 miles per hour. The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air that can result in temperature inversions in the Central Valley. Wintertime high-pressure events often last many weeks, with surface temperatures in the 30°F range. During these events, fog can be present, and inversions can be strong. Winter inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD 2015).

CRITERIA AIR POLLUTANTS

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A description of key criteria air pollutants in the SJVAB and their potential impacts on human health is provided below. The SJVAB's attainment statuses for the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS) are shown in Table 3.3-1.

Table 3.3-1 Attainment Status Designations for the SJVAB

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	Nonattainment (8-hour) ¹	Nonattainment (1-hour) classification: serious ³
	Nonattainment (8-hour) ²	Nonattainment (8-hour)
Respirable particulate matter (PM ₁₀)	Attainment	Nonattainment
Fine particulate matter (PM _{2.5})	Nonattainment	Nonattainment
Carbon monoxide (CO)	Unclassified/attainment	Attainment
Nitrogen dioxide (NO ₂)	Unclassified/attainment	Attainment
Sulfur dioxide (SO ₂) ⁵	Unclassified/attainment	Attainment
Lead (particulate)	Unclassified/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified
Sulfates		Attainment
Visibly reducing particles		Unclassified
Vinyl chloride		Unclassified

¹ 2008 standard.

² 2015 standard.

³ Per Health and Safety Code Section 40921.5(c), the classification is based on 1989–1991 data and therefore does not change.

Sources: CARB 2020; EPA 2024a.

Ozone

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. It is not directly emitted into the air but is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. ROG are volatile organic compounds (VOCs) that are photochemically reactive. For the purposes of CEQA analyses, the terms "ROG" and "VOCs" are used interchangeably and represent the same group of emissions. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_x are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels. The California Air Resources Board (CARB) no longer provides region-wide projections. However, statewide, emissions of the ozone precursors ROG and NO_x have decreased over the past several years because of more stringent motor vehicle standards and cleaner-burning fuels. Emissions of ROG and NO_x decreased from 2000 to 2010 and are projected to continue decreasing from 2010 to 2035 (CARB 2013).

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2024b).

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a brownish, highly reactive gas present in all urban environments. The major human-made sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO₂. The combined emissions of NO and NO₂ are referred to as NO_x and are reported as

equivalent NO_2 . Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a geographical area may not be representative of the local sources of NO_x emissions (EPA 2024b). In the SJVAB, mobile sources account for up to 85 percent of the air basin's smog (SJVAPCD 2024).

Acute health effects of exposure to NO_x include coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, pulmonary edema, breathing abnormalities, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2024b).

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10} . PM_{10} consists of particulate matter emitted directly into the air, such as fugitive dust; soot and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust; and particulate matter formed in the atmosphere by reaction of gaseous precursors (CARB 2013). Fine particulate matter ($\text{PM}_{2.5}$) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM_{10} emissions in the SJVAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, construction and demolition, and particles from residential fuel combustion. Direct emissions of PM_{10} are projected to remain relatively constant through 2035. Emissions of $\text{PM}_{2.5}$ in the SJVAB are dominated by the same sources as emissions of PM_{10} (CARB 2013). In addition, emissions of ambient $\text{PM}_{2.5}$ are heavily influenced by secondary source emissions, such as nitrates, sulfates, and organic compounds from combustion processes, including biomass burning, soil and road dust, livestock operations, and use of aerosols (Behera and Sharma 2010). While primary $\text{PM}_{2.5}$ is from direct emissions, secondary $\text{PM}_{2.5}$ is formed in the atmosphere through photochemical reactions, condensation, and other atmospheric processes.

A number of adverse health impacts have been associated with exposure to both $\text{PM}_{2.5}$ and PM_{10} (EPA 2024b). Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. For $\text{PM}_{2.5}$, short-term exposures (up to 24 hours in duration) have been associated with premature mortality, increased hospital admissions for heart or lung cases, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all the common air pollutants, $\text{PM}_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide. Long-term (months to years) exposure to $\text{PM}_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases and in children with reduced lung function growth.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas formed by the incomplete combustion of fuels. CO is a product of motor vehicle exhaust, which comprises the majority of ambient CO concentrations. High concentrations of CO generally occur in areas with heavy traffic congestion. Other sources of CO emissions include industrial processes, such as carbon black manufacturing, non-transportation-related fuel combustion, and natural sources, such as wildfires. CO can cause harmful health effects by reducing oxygen delivery to the body's organs (including the heart and brain) and tissues. For people with heart disease, short-term exposure to CO can further affect their body's capacity to respond to the increased oxygen demands of exercise or exertion. CO can also be deadly in indoor environments and closed spaces. The San Joaquin Valley has been in attainment for CO since 1994 (SJVAPCD n.d.).

MONITORING STATION DATA AND ATTAINMENT DESIGNATIONS

The San Joaquin Valley Air Pollution Control District (SJVAPCD) operates a system of air monitoring stations, which analyze air quality data on an hourly basis throughout the San Joaquin Valley. The Tranquillity Air Monitoring Station, located approximately 3.1 miles northeast of PG&E's existing Tranquillity Switching Station, is the nearest air monitoring station to the project alignment area. Table 3.3-2 identifies the maximum measured concentrations at this station between 2021 and 2023. Both CARB and the US Environmental Protection Agency (EPA) use this type of

monitoring data to designate areas according to their attainment status for criteria air pollutants (attainment designations are summarized above in Table 3.3-1).

Table 3.3-2 Summary of Annual Data on Ambient Air Quality Near the Project Alignment (2021–2023)

	2021	2022	2023
Ozone			
Maximum concentration (1-hour/8-hour avg, 0.09 ppm/0.070 ppm)	0.088/0.080	0.074/0.066	0.073/0.065
Number of days state/national standard exceeded (8-hour avg, 0.070 ppm)	5	0	0
Number of days national standard exceeded (1-hour, 0.09 ppm)	0	0	0
Fine Particulate Matter (PM_{2.5})			
Maximum concentration (24-hour 12 µg/m ³)	65.3	33.1	26.2
Number of days national standard exceeded (24-hour measured 12 µg/m ³)	7	0	0

Notes: avg = average; µg/m³ = micrograms per cubic meter; ppm = parts per million.

Source: CARB 2023a.

TOXIC AIR CONTAMINANTS

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), the majority of the estimated health risks from toxic air contaminants (TACs) can be attributed to relatively few compounds, the most important being diesel particulate matter (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a PM-exposure method. This method uses the CARB emissions inventory's PM₁₀ database, ambient PM₁₀ monitoring data, and the results from several studies to estimate concentrations of diesel PM. These estimates can be used as a surrogate for diesel PM where information specific to diesel PM is limited due to its highly dispersive character. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Diesel PM poses the greatest health risk among these 10 TACs mentioned. Overall, levels of most TACs, except para-dichlorobenzene and formaldehyde, have decreased since 1990 (CARB 2013).

Through the implementation of air quality improvement strategies in the SJVAB over the past 20 years, concentrations of PM_{2.5} have decreased significantly across the region. During the winter, when concentrations of PM_{2.5} tend to be the highest, the number of days in which the standard for PM_{2.5} was exceeded has decreased since 2002, when 39 percent of days in the winter months exceeded the PM_{2.5} standard in the period from 2002 to 2003. Between 2022 and 2023, only 7 percent of days in the winter months had an exceedance of the PM_{2.5} standard (SJVAPCD 2024).

San Joaquin Valley Fever

Coccidioidomycosis, also known as San Joaquin Valley fever (Valley fever), is a respiratory disease caused by spores from a fungus called *Coccidioides posadasii*. These spores are found in soils located within the southwestern United States, including Fresno County, where the proposed project would be located. When soil is stirred by wind or digging, these spores enter the air, causing people and animals to breathe in the fungus. Approximately 60 percent of people exposed to the fungus will never develop symptoms. Of the approximately 40 percent of people that will develop respiratory symptoms, approximately 15 percent of them will develop a more serious disseminated disease. Valley fever most commonly affects the respiratory system; however, it can cause fever, cough, fatigue, headache, muscle aches, and joint pain. In some cases, the infection will resolve itself in a few weeks; however, for higher-risk patients, antifungal treatment is recommended. People at increased risk of becoming infected with Valley fever in Fresno County include those living or working outdoors in the western region of Fresno County (Fresno County n.d.).

The California Department of Public Health (CDPH) has reported that in California cases of Valley fever have tripled from 2014 to 2018, and between 7,000 and 9,000 cases were reported each year from 2019 to 2022 (CDPH 2024). The CDPH reports there are approximately 80 deaths and 1,000 hospitalizations from Valley fever each year in California (CDPH 2022). Fresno County reported 469 cases of Valley fever in 2022.

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant, perfume). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Within the region encompassing the project alignment, odor sources include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants (SJVAPCD 2015).

SENSITIVE RECEPTORS

Some exposed population groups (e.g., children and people who are elderly or ill) can be especially vulnerable to airborne chemicals and irritants and are termed "sensitive receptors." In addition, because of sustained exposure durations, all persons located within residential areas are considered sensitive receptors. In general, sensitive receptor locations include, but are not limited to, schools, hospitals, day care centers, convalescence homes, residential uses, places of worship, libraries, offices, city and county buildings, and outdoor recreational areas.

The nearest sensitive receptor to the proposed Manning Substation is the single-family residence located approximately 3,400 feet northeast of the substation site boundary where construction would occur (R1). The nearest sensitive receptor to the LSPGC 230 kV transmission line would be residences approximately 1,090 feet south (R2) and 190 feet north (R3) of the proposed alignment. The PG&E 230 kV Reconductoring would parallel the LSPGC 230 kV transmission line; R2 would be located approximately 1,120 feet south and R3 would be located 90 feet north of the reconductoring. The PG&E Panoche Substation Interconnection Modifications would be located 662 feet south of the existing single-family residence (R4). There are no sensitive receptors within 0.25 mile (1,320 feet) of the proposed PG&E 500 kV Interconnections, PG&E 230 kV Interconnections, and PG&E 230 and 115 kV Structure Raises.

3.3.2 Regulatory Setting

Air quality in the project area is regulated through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policymaking, education, and a variety of programs. The agencies responsible for improving the air quality within the air basins are discussed below.

FEDERAL

The EPA has been charged with implementing national air quality programs. The EPA's air quality mandates draw primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990. The EPA's air quality efforts address both criteria air pollutants and hazardous air pollutants (HAPs).

Criteria Air Pollutants

The CAA required the EPA to establish NAAQS for six common air pollutants found all over the United States, referred to as criteria air pollutants. The EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO₂, sulfur dioxide (SO₂), PM₁₀, PM_{2.5}, and lead. Criteria air pollutants are compounds that, at certain concentrations, can cause harm to human and animal health and the environment. Extensive scientific and economic research has been conducted to evaluate the specific concentrations where these pollutants may cause harm to health and environment. These concentrations are reflected in the EPA's NAAQS, which are shown in Table 3.3-3. The primary standards protect public health, and the secondary standards protect public welfare.

The CAA also required each state to prepare a state implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, the EPA may prepare a federal implementation plan that imposes additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

California's SIP is updated periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The current SIP is a compilation of plans and regulations that govern how the region and state will comply with the CAA requirements to attain and maintain the NAAQS for ozone and PM_{2.5}.

Table 3.3-3 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS) ^{ab}	National (NAAQS) ^c Primary ^{bd}	National (NAAQS) ^c Secondary ^{be}
Ozone	1-hour	0.09 ppm (180 µg/m ³)	—	Same as primary standard
	8-hour	0.070 ppm (137 µg/m ³)	0.070 ppm (147 µg/m ³)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	Same as primary standard
	8-hour	9 ppm ^f (10 mg/m ³)	9 ppm (10 mg/m ³)	
Nitrogen dioxide (NO ₂)	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	53 ppb (100 µg/m ³)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	
Sulfur dioxide (SO ₂)	24-hour	0.04 ppm (105 µg/m ³)	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
Respirable particulate matter (PM ₁₀)	Annual arithmetic mean	20 µg/m ³	—	Same as primary standard
	24-hour	50 µg/m ³	150 µg/m ³	
Fine particulate matter (PM _{2.5})	Annual arithmetic mean	12 µg/m ³	9.0 µg/m ³	15.0 µg/m ³
	24-hour	—	35 µg/m ³	Same as primary standard
Lead ^f	Calendar quarter	—	1.5 µg/m ³	Same as primary standard
	30-day average	1.5 µg/m ³	—	—
	Rolling 3-month average	—	0.15 µg/m ³	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	No national standards	
Sulfates	24-hour	25 µg/m ³		
Vinyl chloride ^f	24-hour	0.01 ppm (26 µg/m ³)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m³ = micrograms per cubic meter; CAAQS = California ambient air quality standards; km = kilometers; NAAQS = national ambient air quality standards; ppb = parts per billion; ppm = parts per million.

- a California standards for ozone, carbon monoxide, SO₂ (1- and 24-hour), NO₂, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b Concentration are expressed first in the units in which they were promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- c National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. The PM_{2.5} 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.
- d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Sources: CARB 2016; EPA 2024c.

The National Highway Traffic Safety Administration (NHTSA) also regulates vehicle emissions through the Corporate Average Fuel Economy (CAFE) Standards. The CAFE Standards, which were enacted by Congress in 1975, set fleet-wide averages that must be achieved by each automaker for its car and truck fleet. The purpose of the CAFE Standards is to reduce energy consumption by increasing the fuel economy of cars and light trucks. On April 1, 2022, the transportation secretary unveiled new CAFE standards for 2024–2026 model year passenger cars and light-duty trucks that require new vehicles sold in the United States to average at least 40 miles per gallon.

The EPA has adopted emission standards for different types of non-road engines, equipment, 35 and vehicles. For nonroad diesel engines, the U.S. EPA has adopted multiple tiers of emission 36 standards.

The EPA signed a final rule on May 11, 2004, introducing the Tier 4 emission standards, which were phased in between 2008 and 2015 (69 Code of Federal Regulations (CFR) 38957–39273, June 29, 2004). The Tier 4 standards require that emissions of PM and NO_x be further reduced by about 90 percent relative to the Tier 1-3 standards. Such emission reductions can be achieved through the use of control technologies, including advanced exhaust gas after-treatment. To enable sulfur-sensitive control technologies in Tier 4 engines, the EPA also mandated reductions in sulfur content in nonroad diesel fuels. In most cases, federal nonroad regulations also apply in California, which has only limited authority to set emission standards for new nonroad engines. The Clean Air Act preempts California's authority to control emissions from new farm and construction equipment less than 175 horsepower (hp) (Clean Air Act Section 209[e][1][A]) and requires California to receive authorization from EPA for controls over other off-road sources (Clean Air Act Section 209[e][2][A]). New engines built in and after 2015 across all hp sizes must meet Tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for Tier 4 final emissions standards.

In concert with the diesel engine emission standards, the EPA regulations have also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low-sulfur highway fuel (15 ppmw sulfur), also called ultra-low-sulfur diesel, is currently required for use by all vehicles in the United States (EPA 2023). All the aforementioned federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

Hazardous Air Pollutants and Toxic Air Contaminants

The TACs, or in federal parlance HAPs, are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects, such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects, such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (see Table 3.3-3). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

The EPA regulates HAPs through its National Emission Standards for Hazardous Air Pollutants. The standards for a particular source category require the maximum degree of emission reduction that the EPA determines to be achievable, which is known as the Maximum Achievable Control Technology standards. These standards are authorized by Section 112 of the 1970 CAA and the regulations are published in 40 CFR Parts 61 and 63.

STATE

California Air Resources Board

The CARB is the agency responsible for coordinating and providing oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required CARB to establish the CAAQS (see Table 3.3-3).

Criteria Air Pollutants

The CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the federally regulated criteria air pollutants mentioned above. In most cases, the CAAQS are more stringent than the NAAQS (see Table 3.3-3). Differences in the standards are generally explained by the health effect studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. It specifies that local air districts should focus on reducing the emissions from transportation and area-wide emission sources. The CCAA also provides air districts with the authority to regulate indirect sources, such as vehicle movement and residential, commercial, and industrial development.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (AB 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Hot Spots Act) (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for the CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before the CARB can designate a substance as a TAC. To date, the CARB has identified more than 21 TACs and adopted the EPA's list of HAPs as TACs (CARB 1993). Most recently in 1998, diesel PM was added to CARB's list of TACs (CARB n.d.).

After a TAC is identified, the CARB adopts an airborne toxics control measure for sources that emit that particular TAC. If a threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate the best available control technology for toxins to minimize emissions.

The Hot Spots Act requires facilities that emit toxic substances above a specified level to prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

The CARB has adopted diesel exhaust control measures and more stringent emission standards for various transportation-related mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. EO N-79-20, signed by Governor Newsom in September of 2020, sets the State goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035; that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations, where feasible, and by 2035 for drayage trucks; and that 100 percent of off-road vehicles and equipment will be zero emission by 2035, where feasible. This order calls upon state agencies, including the CARB, the CEC, the CPUC, the Department of Finance, and others to develop and propose regulations and strategies to achieve these goals.

With implementation of the CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB 2023b). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

REGIONAL

Air Quality Plans

The SJVAPCD and the CARB develop air quality planning documents for pollutants for the project area, which is classified as a federal nonattainment or maintenance area. These planning documents are approved by the EPA. The following sections summarize the SJVAPCD's air quality plans.

Ozone Plan

2022 Plan for the 2015 8-Hour Ozone Standard: The most recently adopted plan for ozone that applies to the project is the *2022 Plan for the 2015 8-Hour Ozone Standard* (2022 Ozone Plan). In their review of the 2022 Ozone Plan, the CARB staff concluded that the 2022 Ozone Plan meets the requirements of the Clean Air Act for the 70 ppb 8-hour ozone standard and recommended that the CARB adopt an aggregate emissions reduction commitment along with the 2022 Ozone Plan, as revisions to the California SIP. To achieve the requirements of the Clean Air Act for the 70 ppb 8-hour ozone standard, the 2022 Ozone Plan includes an attainment demonstration, reasonable further progress, reasonably available control measure, and transportation conformity demonstrations, an emissions inventory, and other elements (CARB 2022).

PM₁₀ Plan

2007 PM₁₀ Maintenance Plan and Request for Redesignation: The most recently adopted plan for PM₁₀ that applies to the project is the *2007 PM₁₀ Maintenance Plan and Request for Redesignation*. This plan provides verification of continued PM₁₀ attainment, a contingency plan, an attainment emissions inventory, a maintenance demonstration, and a demonstration of California's monitoring network (SJVAPCD 2007).

PM_{2.5} Plan

2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards: The most recently adopted plan for PM_{2.5} that applies to the project is the *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards*. This plan integrates the 1997, 2006, and 2012 NAAQS PM_{2.5} standards and aims to achieve attainment of the PM_{2.5} standards through a strategy that includes regulatory measures, incentive-based measures to accelerate the deployment of cleaner vehicles and technologies in a variety of sectors, and a mobile source strategy that reduces emissions from mobile sources under state and federal jurisdiction.

Air District Regulations

The project is located within the jurisdiction of the SJVAPCD. The SJVAPCD is the regional agency charged with preparing, adopting, and implementing emission control measures and standards for stationary sources of air

pollution pursuant to delegated state and federal authority. Because the project would not involve construction of new stationary sources, there are no permitting regulations relevant to the project.

Under the CCAA, the SJVAPCD is required to develop an air quality plan to achieve and maintain compliance with federal and state nonattainment criteria pollutants within the air district. Jurisdictions of nonattainment areas also are required to prepare an air quality management plan (AQMP) that includes strategies for achieving attainment. The SJVAPCD has approved AQMPs demonstrating how the SJVAB will reach attainment with the federal 1-hour and 8-hour ozone, PM₁₀, PM_{2.5}, and California CO standards, as described above.

Regulation VIII, Fugitive PM₁₀ Prohibition, contains rules developed pursuant to the EPA guidance for serious PM₁₀ nonattainment areas. Rules included under this regulation aim to reduce ambient concentration of PM₁₀ by the following methods: preventing, reducing, or mitigating fugitive dust emissions from construction sites during excavation, demolition, and other earthmoving activities; regulating bulk material handling, storage, and transport; preventing carryout and trackout; and requiring construction crews to drive on paved and unpaved vehicle and equipment traffic areas. A SJVAPCD-approved dust control plan is required for projects in which construction-related activities will disturb 5 or more acres of surface area.

Air District Rules

The following rules established by the SJVAPCD to regulate air quality are relevant to the project:

- ▶ **Rule 4101 – Visible Emissions:** A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:
 - As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
 - Of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in Section 5.1 of this rule.
- ▶ **Rule 4102 – Nuisance:** A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which 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 or which cause or have a natural tendency to cause injury or damage to business or property.
- ▶ **Rule 4201 – Particulate Matter Concentration:** A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.
- ▶ **Rule 4202 – Particulate Matter Emission Rate:** The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates.
- ▶ **Rule 4661 – Organic Solvents:** The purpose of this rule is to limit the emissions of VOCs from the use of organic solvents. This rule also specifies the reduction, monitoring, reporting, and disposal requirements.
- ▶ **Rule 4801 – Sulfur Compounds:** A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: two-tenths (0.2) percent by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.
- ▶ **Rule 2010 – Permits Required:** The purpose of this rule is to require any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting, or falsifying any Permit to Operate.
- ▶ **Rule 8011 – Fugitive PM₁₀ Prohibitions:** As a compliance alternative for Rule 8061 section 5.2 and Rule 8071 section 5.1, an operator may implement a Fugitive PM₁₀ Management Plan (FPMP) that is designed to achieve 50 percent control efficiency and has been approved by the Air Pollution Control Officer (APCO). The FPMP shall be implemented on all days that traffic exceeds, or is expected to exceed, the number of annual average daily vehicle

trips or vehicle trips per day as specified in Rules 8061, 8071, and 8081. The owner/operator remains subject to all requirements of the applicable rules of Regulation VIII that are not addressed by the FPMP. It should be noted that the FPMP is not a compliance option for any requirement for a stabilized surface as defined in Rule 8011.

- ▶ **Rule 8071 – Unpaved Vehicle/Equipment Traffic Areas:** Where 50 or more Average Annual Daily Trips will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall limit VDE to 20 percent opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures, or shall implement an APCO-approved FPMP as specified in Rule 8011 (General Requirements): Watering; Uniform layer of washed gravel; Chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications; Vegetative materials; Paving; Roadmix; Any other method(s) that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20 percent opacity and meets the conditions of a stabilized unpaved road. For unpaved vehicle/equipment traffic areas with 150 VDT, or 150 VDT that are utilized intermittently for a period of 30 days or less during the calendar year, the owner/operator shall implement the control options previously listed during the period that the unpaved vehicle/equipment traffic area is utilized. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall limit VDE to 20 percent opacity and comply with the requirements of a stabilized unpaved road by the application and/or reapplication/maintenance of at least one of the control measures specified previously.

SJVAPCD CEQA Guidance

The SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) assists lead agencies and project applicants in evaluating the potential air quality impacts of projects in the SJVAB (SJVAPCD 2015). The GAMAQI recommends procedures for evaluating potential air quality impacts for the CEQA environmental review process and provides guidance on evaluating short-term (construction) and long-term (operational) air emissions.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. However, local plans and policies related to air quality are considered for informational purposes.

Fresno County General Plan

The Air Quality section of the Fresno County General Plan Open Space and Conservation Element (2024) outlines policies and programs intended to improve the air quality in the county to protect its residents and visitors. The General Plan contains the following policies pertaining to air quality that are relevant to the project:

- ▶ **Policy OS-G.1:** The County shall develop standard methods for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents. The County will do this in conjunction with the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and the cities in Fresno County.
- ▶ **Policy OS-G.2:** The County shall ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. The County shall require projects to comply with the County's adopted air quality impact assessment and mitigation procedures.

- ▶ **Policy OS-G.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 SJVAPCD'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.
- ▶ **Policy OS-G.15:** The County shall continue to work to reduce PM₁₀ and PM_{2.5} emissions from County-maintained roads by considering shoulder treatments for dust control as part of road reconstruction project.

3.3.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to air quality.

LSPGC APMS

- ▶ **APM AIR-1: Tier 4 Construction Equipment.** At least 75 percent of construction equipment with a rating between 100 and 750 horsepower will be required to use engines compliant with Environmental Protection Agency Tier 4 non-road engine standards. In the event that enough Tier 4 equipment is not available to meet the 75-percent threshold, documentation of the unavailability will be provided, and engines utilizing a lower standard will be used.
- ▶ **APM AIR-2: Dust Control.** Measures to control fugitive dust emissions will be implemented during construction. These measures will be included in a Fugitive Dust Control Plan that will be prepared in accordance with SJVAPCD requirements. The measures will be implemented as needed to control dust emissions. These measures will include, but may not be limited to, the following:
 - Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance.
 - Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or will be covered.
 - Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material will be covered with tarps or maintain at least 6 inches of freeboard.
 - Vehicles will adhere to a speed limit of 15 mph on project-specific construction routes and within temporary work areas.

PG&E CMS

- ▶ **CM AIR-1: Tier 4 Construction Equipment.** At least 75 percent of construction equipment with a rating between 100 and 750 horsepower (hp) will be required to use engines compliant with Environmental Protection Agency Tier 4 non-road engine standards. In the event enough Tier 4 equipment are not available to meet the 75-percent threshold, documentation of the unavailability will be provided and engines utilizing a lower standard will be used.
- ▶ **CM AIR-2: Fugitive Dust Control.** The following actions will be taken, as applicable and feasible, to control fugitive dust during construction. SJVAPCD notifications will be made in accordance with any requirements in effect at the time of construction.
 - Applying water to disturbed areas and to storage stockpiles.

- Applying water in sufficient quantities to prevent dust plumes during activities such as clearing and grubbing, backfilling, trenching, and other earth-moving activities.
- Limit vehicle speed to 15 mph.
- Load haul trucks with a freeboard (space between top of truck and load) of 6 inches or greater.
- Cover the top of the haul truck load.
- Clean up track-out at least daily.

3.3.4 Analysis Methodology and Significance Criteria

Impacts related to air quality were analyzed according to Appendix G of the State CEQA Guidelines and the SJVAPCD's GAMAQI.

Construction and Operation Emissions

Air quality emissions were estimated using emission factors and methods from the California Emissions Estimator Model (CalEEMod) v2022.1, emission factors from the EPA AP-42, CARB vehicle emission models, and California Energy Commission and other agency studies (CAPCOA 2022). Helicopter emissions were estimated based on the Swiss FOCA Guidance on the Determination of Helicopter Emissions (FOCA 2015). The SJVAPCD recommends that 12-month rolling emissions be compared to the applicable annual thresholds when a project's construction phase lasts more than 1 year. Construction is anticipated to require 27 months to complete. Therefore, 17 separate rolling 12-month periods were developed to evaluate the project. The entirety of the construction process was separated into 39 unique phases, as shown in Appendix D. For each phase of construction, the specified off-road equipment, on-road vehicles, and helicopters were assumed to operate for the entire duration of the phase. Decommissioning emissions were assumed to be similar to construction emissions. The GAMAQI also recommends a 100-pound-per-day screening threshold for on-site emissions of all criteria pollutants after the implementation of all enforceable control measures. Because of the linear nature of the project, on-site emissions from individual activities were combined in instances where they would occur at the same time and general location. Construction activities could contribute to a receptor being exposed to increased criteria air pollutant emissions that could occur in the same geographic area for each group were identified. The "On-Site Emissions Grouping" table, included in Appendix D, shows how construction phases were grouped.

Work was assumed to occur every day of the week except Sundays and federal holidays. The daily graded area was determined by comparing the average daily use, by grading equipment, against standard grading efficiency values contained in Table G-14 from Appendix G of the CalEEMod Guide. Consistent with the CalEEMod Guide Section 4.4.4, "Emissions Control," a 61-percent reduction in fugitive dust emissions would result from water two times daily, consistent with APM AIR-2. On-road vehicle distances were generally assumed to be 50 miles for each one-way vehicle trip (the approximate distance to the City of Fresno from the project alignment area). Emissions modeling results are presented in Appendix D.

Screening Health Risk Assessment

A screening health risk assessment (HRA) of the project was performed by LSPGC using methods consistent with the Office of Environmental Health Hazard Assessment (OEHHA) guidance and reviewed by Ascent (OEHHA 2015). The HRA was performed for locations where construction activities would occur for more than 2 months in duration and in populated areas with sensitive receptors, pursuant to OEHHA guidance (OEHHA 2015). The construction duration evaluated in the HRA is 518 calendar days. The HRA evaluated the health risks of TAC emissions from use of on-site diesel equipment, and the diesel PM emissions were used as a surrogate for the TACs emissions in the HRA. The HRA analyzed cancer and chronic health risks from diesel PM emissions. Currently, there are no approved acute risk values for diesel PM. Diesel PM was assumed to be best represented by PM₁₀ emitted as a result of fuel combustion. The AERMOD dispersion model was used to determine the concentration of PM_{2.5} from the diesel exhaust generated during construction at the nearby residential receptor. Details on the methodology and calculations are included in the HRA technical memorandum provided in Appendix D.

SIGNIFICANCE CRITERIA

CEQA-related air quality thresholds of significance are tied to long-term air quality planning, which focuses on achieving or maintaining attainment designations with respect to the NAAQS and CAAQS for criteria air pollutants, which are scientifically substantiated numerical concentrations considered to be protective of human health. The SJVAPCD developed quantitative thresholds of significance for project-level CEQA evaluation that may be used to determine the extent to which a project's emissions of criteria air pollutants and precursors would contribute to the regional degradation of ambient air quality within the SJVAB. According to the SJVAPCD, projects with emissions below these thresholds of significance would demonstrate consistency with the SJVAPCD's air quality plans. In the GAMAQI, the SJVAPCD provides evidence to support the development and applicability of its thresholds of significance for project-generated emissions of criteria air pollutants and precursors, which may be used at the discretion of a lead agency overseeing the environmental review of projects located within the SJVAB.

These numerical thresholds for construction- and operation-and-management-related emissions of criteria air pollutants and precursors would determine whether a project's discrete emissions would result in a regional contribution (i.e., significant) to the baseline nonattainment status of SJVAB. In developing thresholds of significance for individual project emissions, the SJVAPCD analyzed emissions values against the SJVAPCD's offset thresholds to ozone precursors, which, when applied, prevent further deterioration of ambient air quality in the SJVAB. Thresholds for PM₁₀ and PM_{2.5} were adopted from the SJVAPCD's PM₁₀ New Source Review offset thresholds for stationary sources, which represent the greatest component of the SJVAPCD's long-term regional air quality planning (SJVAPCD 2015: 82). Using these parameters, the SJVAPCD developed quantitative thresholds of significance for project-level CEQA evaluation that may be used to determine the extent to which a project's emissions of criteria air pollutants and precursors would contribute to the regional degradation of ambient air quality within the SJVAB. According to the SJVAPCD, projects with emissions below these thresholds of significance would demonstrate consistency with the SJVAPCD's air quality plans. Notably, annual-emissions thresholds of significance are not designed to determine whether a project's contribution of emissions would directly result in a violation of the NAAQS or CAAQS, which are hourly, concentration-based standards.

The SJVAPCD has also developed daily emissions screening criteria for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} to determine whether an ambient air quality analysis is needed to provide a refined analysis to determine if project emissions would result in a violation of an ambient air quality standard (AAQS). Unlike the SJVAPCD's annual emissions thresholds, which are used to evaluate a project's consistency with long-term regional air quality planning, these daily emissions screening criteria serve to determine the location where an exceedance of an AAQS, and resulting adverse health impacts, could occur. Because the NAAQS and CAAQS are concentration-based standards presented hourly, daily emissions are a more suitable estimate to determine whether a project would contribute to a violation of an AAQS. Projects that emit emissions below these daily screening criteria would likely not generate emissions in levels that would result in a violation of an AAQS, and air dispersion modeling would not be required. Consequently, projects that emit emissions above these criteria are recommended to perform an ambient air quality analysis to evaluate whether an exceedance, and resulting health impact, would occur.

Using federal and state guidance pertaining to TACs, in addition to the findings of several scientific studies, the SJVAPCD developed cancer risk and noncancer health hazard thresholds for TAC exposure. Unlike criteria air pollutants, there is no known safe concentration of TACs for cancer risk. Moreover, TAC emissions contribute to the deterioration of localized air quality. Due to the dispersion characteristics of TACs, emissions generally do not cause regional-scale air quality impacts. The SJVAPCD's thresholds are designed to ensure that a source of TACs does not contribute to a localized, significant impact on existing or new receptors.

3.3.5 Discussion

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

Air quality plans are developed to identify emissions reduction measures needed to attain and maintain air quality standards. The air quality plans and the SJVAPCD rules applicable to the area are listed above in Section 3.3.2,

"Regulatory Setting." These air quality plans identify emission-reduction measures that are designed to bring the region into attainment of the CAAQS and NAAQS. The emission inventories used to develop these plans are based primarily on projected population and employment growth and associated vehicle miles traveled (VMT) for the SJVAB. This growth is estimated for the region, based in part on the planned growth identified in regional and local land use plans, such as general plans or community plans.

LSPGC and PG&E Project Components

Construction and Decommissioning

Criteria pollutant emissions associated with construction and decommissioning of the project would be temporary and would represent a small fraction of the regional emission inventories included in the applicable air quality plans. Construction and decommissioning of the project would comply with the applicable federal, state, and local regulations described in Section 3.3.2, because the regional air regulations and rules are developed to ensure the implementation of the regional air quality plans; therefore, compliance with these regulations would ensure that project's activities would not obstruct implementation of the air quality plans of the region. Specifically, construction of the LSPGC and PG&E components would be performed in compliance with the applicable the SJVAPCD rules and regulations (see Section 3.3.2 "Regulatory Setting," above), ensuring that activities would be consistent with the SJVAPCD's efforts to attain and maintain the NAAQS and CAAQS. Therefore, project construction would not conflict with the implementation of SJVAPCD's air quality plans. In addition, as described under item "b," the project would be consistent with SJVAPCD's adopted emission thresholds for CEQA evaluation. Consistency with SJVAPCD's emissions thresholds would further ensure that the project emissions would not conflict with or hinder the implementation of the air quality plans and that project emissions would not substantially contribute to regional emissions.

Operation and Maintenance

LSPGC components associated with the project would be operated and monitored remotely by LSPGC's control center in Austin, Texas, and the California Independent System Operator's (CAISO's) control center in Folsom, California. PG&E components associated with the project would also be unstaffed during operation and monitored remotely and would therefore not require the hiring of full-time staff. Inspections of the proposed LSPGC Manning Substation would be conducted quarterly, and a small crew of workers would perform more extensive maintenance activities. Routine maintenance of the proposed LSPGC 230 kV transmission line would require approximately one trip per year by crews of one to four people. PG&E's local maintenance/technical staff and outside resources would respond to maintenance issues and emergency situations related to PG&E's components associated with the project. Therefore, operation of the project would not result in population or employment growth that would conflict with the population and employment growth projections used to develop the applicable air quality plans. As shown in Table 3.3-6, operation and maintenance activities associated with the project, such as maintenance and inspection trips, would result in a minor incremental increase in regional emissions and would not exceed the SJVAPCD thresholds. Therefore, these emissions would not exceed the emissions accounted for in the applicable air quality plans and would be consistent with the SJVAPCD efforts to achieve attainment and maintain the NAAQS and CAAQS.

Conclusion

Neither construction, decommissioning, nor operation and maintenance of the LSPGC and PG&E portions of the project would result in emissions of criteria pollutants in excess of the SJVAPCD's annual or daily emissions thresholds, as shown in Tables 3.3-4, 3.3-5, and 3.3-6, which were developed in consideration of state and regional air quality planning. Because the project would primarily involve construction activities and operation and maintenance of the project would only include occasional activities, the project would not result in population or employment growth and thus would not conflict with the emissions reduction goals of the applicable air quality plans tied to projected regional VMT. Therefore, this impact would be **less than significant**. Because air district thresholds are developed to attain and maintain the NAAQS and CAAQS, which themselves are intended to protect human health, the project would not contribute to adverse health effects within the SJVAB.

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?

As shown in Table 3.3-1 in Section 3.3.1, “Environmental Setting,” the SJVAB has been designated as nonattainment for ozone and PM_{2.5} in regard to the NAAQS and ozone, PM₁₀, and PM_{2.5} in regard to the CAAQS. According to the GAMAQI, any project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact (SJVAPCD 2015).

LSPGC and PG&E Project Components

Construction and Decommissioning

Construction- and decommissioning-related activities would result in project-generated emissions of ROG, NO_x, PM₁₀, and PM_{2.5}. These activities would include the use of off-road equipment (e.g., excavators, a helicopter, and augers), material delivery trips (e.g., gravel for filling, electrical poles, and equipment for the Manning Substation), and on-road vehicle trips associated with worker commute trips, as well as line trucks. Fugitive dust emissions of PM₁₀ and PM_{2.5} are associated primarily with excavation and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and VMT on and off the site. Both heavy-duty equipment exhaust and on-road mobile exhaust result in emissions of the ozone precursors ROG and NO_x.

As stated under Section 3.3.4, “Analysis Methodology and Significance Criteria,” 17 separate rolling 12-month periods were developed to compare the anticipated maximum 12-month rolling emissions to the SJVAPCD’s annual construction thresholds for criteria air pollutants. The anticipated maximum 12-month rolling emissions for each year of construction of the project, including both LSPGC and PG&E components, is provided in Table 3.3-4. This analysis assumes that decommissioning emissions would be similar to construction emissions. Table 3.3-4 summarizes emissions that could result from construction of the project under an uncontrolled scenario, which does not include implementation of APMs and CMs. As shown in Table 3.3-4, under the uncontrolled emissions scenario, construction emissions would exceed the SJVAPCD’s annual thresholds for construction-related NO_x and PM₁₀.

Table 3.3-4 Uncontrolled Maximum 12-Month Rolling Construction Emissions

Emission Scenario	ROG (tpy)	NO _x (tpy)	CO (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)
Uncontrolled emissions	3.5	14.1	13.5	0.1	54.5	6.1
SJVAPCD threshold	10	10	100	27	15	15
Threshold exceeded?	No	Yes	No	No	Yes	No

Notes: tpy = tons per year; ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District.

Source: LSPGC 2024.

Implementation of APMs and CMs

Construction activities related to the LSPGC portion of the project would incorporate APMs AIR-1 and AIR-2 to reduce criteria pollutant emissions associated with LSPGC project components. APM AIR-1 identifies a target for at least 75 percent of construction equipment with a rating between 100 and 750 horsepower (hp) to comply with the EPA Tier 4 offroad engine standards to be used by LSPGC. Pursuant to APM AIR-2, LSPGC would implement fugitive dust control measures, consistent with the SJVAPCD requirements, as needed during project construction. These measures to control fugitive dust emissions would require disturbed areas to be covered, watered, or treated with a dust suppressant; reduced drop heights from excavators and loaders; all haul trucks to maintain a minimum of 6 inches of freeboard or cover all loads; and trucks to maintain a speed limit of 15 miles per hour (mph) on project-specific construction routes and within temporary work areas.

Construction activities related to the PG&E portion of the project would incorporate CM AIR-1, which identifies a target for at least 75 percent of construction equipment with a rating between 100 and 750 hp to comply with the EPA Tier 4 non-road engine standards to be used by PG&E, as well as CM AIR-2, which would require PG&E to

control fugitive dust emissions through construction practices, such as applying water to disturbed areas, limiting vehicle speeds, and covering the tops of haul truck loads.

As shown in Table 3.3-5 if APMs AIR-1 and AIR-2 and CMs AIR-1 and AIR-2 are implemented under the controlled emissions scenario the project would not result in emissions that exceed any of the SJVAPCD's construction-related criteria pollutant significance thresholds. However, APM AIR-1 and CM AIR-1 do not require LSPGC and PG&E to reduce NO_x and PM₁₀ emissions. Therefore, there is the possibility that these measures would not be implemented to the extent that they would sufficiently reduce construction emissions below the SJVAPCD thresholds. APM AIR-2 and CM AIR-2 include compliance with the SJVAPCD requirements for dust (PM₁₀) reduction.

Table 3.3-5 Controlled Maximum 12-Month Rolling Construction Emissions

Emission Scenario	ROG (tpy)	NO _x (tpy)	CO (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)
Controlled emissions	3.1	9.5	16.9	0.1	14.9	2.0
SJVAPCD threshold	10	10	100	27	15	15
Threshold exceeded?	No	No	No	No	No	No

Notes: tpy = tons per year; ROG = reactive organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District.

Source: LSPGC 2024.

The SJVAPCD's GAMAQI also recommends a 100-pound-per-day screening threshold for on-site emissions of all criteria pollutants after the implementation of all enforceable control measures. Because of the linear nature of the project, on-site emissions from individual activities were combined in instances where they would occur at the same time and general location. The "On-Site Emissions Grouping" table included in Appendix D identifies how individual construction phases were grouped. Table 3.3-6 evaluates the anticipated daily on-site construction emissions for each of the five resulting groups.

Table 3.3-6 Maximum Daily On-Site Controlled Construction Emissions

Construction Activity Group	ROG (lb/day)	NO _x (lb/day)	CO (lb/day)	SO ₂ (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Construction phase group 1	43.8	74	87.5	0.5	28.2	4.8
Construction phase group 2	14.5	23.8	24.8	0.2	9.6	1.6
Construction phase group 3	28.1	38.3	51.6	0.3	17.4	2.5
Construction phase group 4	28.8	46.7	64.2	0.3	17.6	3
Construction phase group 5	1.1	10.3	32.9	0.1	4.6	0.8
SJVAPCD screening threshold	100	100	100	100	100	100
Threshold exceeded?	No	No	No	No	No	No

Notes: lb/day = pounds per day; ROG = reactive organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District.

Source: LSPGC 2024.

As shown in Table 3.3-6, emissions associated with construction of the project would not exceed the SJVAPCD screening threshold of 100 pounds per day for any criteria air pollutant.

Operation and Maintenance

The project would result in nominal equipment and vehicle use during operation and maintenance activities. The Manning Substation would be unstaffed and controlled remotely. Inspections of the proposed Manning Substation would occur on a quarterly basis while small, specialized crews would perform more extensive maintenance activities as needed. Routine maintenance of the proposed LSPGC 230 kV transmission line would require approximately one trip per year by crews of one to four people. Because of their infrequency and relative low intensity, maintenance and inspection trips would result in an incremental increase in regional emissions. Operation and maintenance activities associated with the PG&E components of the project would be similar to those currently performed by PG&E for its

existing substations and transmission lines. PG&E would add maintenance of their project components into their existing maintenance route for the regional. Therefore, emissions sources and quantities from increased operation and maintenance activities would be similar to existing emissions sources and quantities. The anticipated annual emissions from the increase in regular operation and maintenance activities are estimated and summarized in Table 3.3-7.

Table 3.3-7 Annual Operation and Maintenance Emissions

Activity	ROG (tpy)	NO _x (tpy)	CO (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)
LSPGC O&M	0.001	0.007	0.008	< 0.001	0.001	0.001
PG&E O&M	0.001	0.007	0.008	< 0.001	0.001	0.001
Total	0.002	0.014	0.016	<0.001	0.002	0.002
SJVAPCD threshold	10	10	100	27	15	15
Threshold exceeded?	No	No	No	No	No	No

Notes: LSPGC = LS Power Grid California; PG&E = Pacific Gas and Electric; tpy = tons per year; ROG = reactive organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District.

Source: LSPGC 2024.

As shown in Table 3.3-7, operation and maintenance of the project would not result in emissions that would exceed the SJVAPCD's annual thresholds of significance.

Significance before Mitigation

Implementation of LSPGC APM AIR-2 and PG&E CM AIR-2 would require that LSPGC and PG&E implement fugitive dust control measures, consistent with the SJVAPCD requirements, as needed during project construction. These measures to control fugitive dust emissions would require disturbed areas to be covered, watered, or treated with a dust suppressant; reduced drop heights from excavators and loaders; all haul trucks to maintain a minimum of 6 inches of freeboard or cover all loads; and trucks to maintain a speed limit of 15 miles per hour (mph) on project-specific construction routes and within temporary work areas. Implementation of these measures would maintain emissions such that the SJVAPCD's fugitive dust significance thresholds would not be exceeded.

The SJVAB has been designated as nonattainment for ozone and PM_{2.5} in regard to the NAAQS and ozone, PM₁₀, and PM_{2.5} in regard to the CAAQS. According to the GAMAQI, projects that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Construction of the project would not exceed the SJVAPCD screening threshold of 100 pounds per day for any criteria air pollutant. However, as shown in Table 3.3-4, the project would exceed the SJVAPCD's annual thresholds for construction-related NO_x and PM₁₀. As shown in Table 3.3-5, the use of Tier 4 engines in at least 75 percent of the construction equipment (i.e., with implementation of APM AIR-1 and CM AIR-1) would reduce construction-related NO_x and PM₁₀ emissions. However, because APM AIR-1 and CM AIR-1 do not absolutely require the use of Tier 4 engines in at least 75 percent of the construction equipment, it cannot be ensured that such reductions would be achieved. Consistent with guidance provided by the SJVAPCD, because construction of the project would exceed the SJVAPCD's annual thresholds for construction-related NO_x and PM₁₀ without use of Tier 4 equipment, this impact would be significant without mitigation. Operation and maintenance of the project would not result in emissions that would exceed the SJVAPCD's annual thresholds of significance.

Construction Measures and Mitigation Measures

Construction Measure AQ-A [PG&E] / Mitigation Measure AQ-1 [LSPGC]: Tier 4 Construction Equipment

The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APM AIR-1 and PG&E CM AIR-1 as presented in the PEA:

Construction contractors for the project shall use engines that meet the EPA's Tier 4 emission standards, as defined in 40 CFR 1039, in at least 75 percent of construction equipment with a rating between 100 and 750 hp off-road

construction equipment and shall comply with the appropriate test procedures and provisions contained in 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment, as it becomes available, for at least 75 percent of construction equipment and/or by using a combination of engines that meet the EPA's Tier 4 emission standards and battery-electric off-road construction equipment, as long as the total of Tier 4 and battery-electric construction equipment comprises 75 percent of construction equipment.

Implementation of this measure shall be required in the contract the project applicant establishes with its construction contractors. LSPGC and PG&E shall separately demonstrate their plans to fulfill the requirements of this measure in a memorandum that shall be submitted to the CPUC before the use of any off-road diesel-powered construction equipment on the site. Each memorandum shall include a list of the equipment and vehicles to be used during construction of LSPGC and PG&E project components with details including equipment/vehicle engine tiers and expected daily and annual usage hours to demonstrate adherence to the 75 percent requirement above.

Significance after Mitigation

As shown in Table 3.3-5, implementation of Construction Measure AQ-A/Mitigation Measure AQ-1 would reduce emissions from LSPGC and PG&E construction equipment by requiring that at least 75 percent of off-road construction equipment with a rating between 100 and 750 hp use Tier 4 or battery electric technology. Notably, as stated in Construction Measure AQ-A/Mitigation Measure AQ-1, contractors for the project shall be required to use Tier 4 engines, battery-electric off-road equipment as it becomes available, or a combination thereof to meet the requirements of the measure. Tier 4 engines are generally more widely available than battery electric equipment due to federal mandates that require new manufactured engines not to exceed the emissions established for Tier 4 final emissions standards. Coupled with constraints related to the project's rural location and therefore limited access to electrical infrastructure, it is expected that the use of Tier 4 engines would be the primary means by which the project would comply with the equipment-related emissions reduction requirements included in Construction Measure AQ-A/Mitigation Measure AQ-1. It is possible that battery electric equipment would be used in a limited capacity if certain Tier 4 equipment is not available. With the signing of EO N-79-20 in 2020, which includes new State goals that 100 percent of off-road vehicles and equipment be zero emission by 2035 (where feasible), the availability of battery electric equipment is expected to continue to grow throughout the state. Where feasible, temporary power from the existing overhead distribution system or temporary generators would be used during construction and may provide power for battery electric equipment charging.

Construction Measure AQ-A/Mitigation Measure AQ-1 shall supersede and replace APM AIR-1 and CM AIR-1 to require that at least 75 percent of the specific construction equipment will use Tier 4 engines. With implementation of Construction Measure AQ-A/Mitigation Measure AQ-1, LSPGC APM AIR-2, and PG&E CM AIR-2, the project would not result in emissions of criteria pollutants in excess of the SJVAPCD's annual or daily emissions thresholds. Because implementation of the project with mitigation incorporated would not result in an exceedance of the SJVAPCD thresholds or screening criteria for nonattainment pollutants, this impact would be **less than significant** and not cumulatively considerable. Because air district thresholds are developed to attain and maintain the NAAQS and CAAQS, which themselves are intended to protect human health, the project would not contribute to adverse health effects within the SJVAB.

c) Expose sensitive receptors to substantial pollutant concentrations?

PG&E and LSPGC Project Components

Sensitive receptors are generally considered to include land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the older population. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and the potential for increased and prolonged exposure of individuals to pollutants. The nearest sensitive receptor to the Manning Substation, a single-family residence, is located approximately 3,400 feet from the proposed primary substation construction activities.

When considering operational TACs, stationary sources are the primary sources of concern because they pose a greater chance of exposing receptors to long-term TAC emissions. Because operation and maintenance of the project

does not include any stationary sources, operational TACs are not evaluated further. Therefore, construction activities and associated TAC exposure are the focus of this analysis.

Construction- and decommissioning-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment. The potential cancer risk from inhaling diesel PM outweighs the potential for all other diesel PM-related health impacts (i.e. noncancer chronic risk, short-term acute risk) and health impacts from other TACs, so diesel PM is the focus of this analysis. Construction- and decommissioning-related activities that would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road heavy-duty diesel equipment include clearing, grading, excavation, on-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment, and other miscellaneous activities. Diesel PM is highly dispersive and decreases by approximately 70 percent at a distance of 500 feet from the source (Zhu et al. 2002).

An HRA (refer to Appendix D) was prepared and evaluated the health risks from on-site diesel equipment emissions during construction and decommissioning because these are the primary pollutants of concern regarding TACs. The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Therefore, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to OEHHHA, HRAs, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed project (OEHHHA 2015: 2-3).

As noted in the HRA, because of the linear nature of transmission line work, sensitive receptors near the proposed project, would not experience a noticeable increase in emissions due to construction of the transmission lines (i.e., Residences 1 and 2, identified above in Section 3.3.1, "Environmental Setting"). Unlike fixed construction areas, which have longer exposure times due to activities occurring in one location over the course of the construction period, linear construction such as that associated with transmission lines moves along a set path throughout the construction phase, meaning that no single receptor is exposed to construction-related TACs for an extended period of time (Ldn Consulting 2024). Therefore, the HRA focuses on receptors (i.e., Receptor 3) near the proposed substation, which would have a fixed construction area.

According to the project HRA, the worst-case annual concentration of diesel PM from project construction is estimated at 0.00136 micrograms per cubic meter (Ldn Consulting 2024). Therefore, the worst-case annual concentration of project diesel PM at the nearest residential receptor would result in a diesel PM exposure of less than one in one million. This exposure is less than the SJVAPCD's threshold of 20 per one million exposed. Therefore, the project would not result in a significant cancer risk at nearby receptors. The HRA also evaluated known acute and chronic health risks associated with diesel exhaust, which are considered noncancer risks. The project would not result in an increase for noncancer risks because the concentration of diesel PM divided by the Reference Exposure Level yields a Health Hazard Index less than one (Ldn Consulting 2024). Therefore, no acute or chronic health risks would occur from construction or decommissioning. For a detailed methodology of calculations used to estimate health risks associated with project construction, see Appendix D.

Implementation of APMs and BMPs

Regarding Valley fever, LSPGC APM AIR-2 and PG&E CM AIR-2 would be implemented throughout construction of the LSPGC and PG&E portions of the project to reduce fugitive dust emissions by requiring that disturbed areas be stabilized, soil drop heights be minimized, covering or maintaining freeboard when hauling soil, and limiting vehicle speeds on unpaved roads.

Conclusion

There are no stationary sources proposed as part of the project, and operation and maintenance activities would be minimal, resulting in negligible health risks. Construction and decommissioning would not generate emissions of PM

above the SJVAPCD's thresholds, and emissions of diesel PM, the primary pollutant of concern when discussing TACs, would be approximately 7.3 pounds per day. Diesel PM emissions would be dispersed across the project alignment area, and concentrations would likely be less at individual receptors. Additionally, the implementation of Mitigation Measure AQ-1 would reduce emissions from off-road equipment and on-road vehicle use related by requiring that at least 75 percent of construction equipment have a rating between 100 and 750 hp and have engines compliant with the EPA Tier 4 non-road engine standards. The project would not result in the prolonged exposure of sensitive receptors to substantial concentrations of TACs nor expose receptors to substantial pollution resulting in adverse health effects in the SJVAB. This impact would be **less than significant**.

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

LSPGC and PG&E Project Components

Construction activities related to the LSPGC portion of the project and the PG&E portion of the project would entail similar activities and, therefore, similar odor sources. Specifically, minor odors from the use of heavy-duty diesel equipment and the pouring of concrete during construction activities would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. These types of odor-generating activities would not occur at any single location or for an extended period of time. While short-term odor emissions from construction equipment may occur, project construction would not result in substantial odor emissions that would result in the physical effects described under the "Odors" heading in Section 3.3.1, "Environmental Setting." Furthermore, these emissions would be localized and would not affect a substantial number of people. Activities associated with project operation and maintenance would be limited to activities involving a small number of on-road and off-road vehicles that would occur infrequently and for relatively short durations.

The SJVAPCD identifies odor sources of concern to be land uses that include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants (SJVAPCD 2015). The project does not include any of these land uses.

The project is not a type of development that is known to result in odors. Minor odors from the use of heavy-duty diesel equipment and the pouring of concrete during construction activities associated with the project would be intermittent and temporary and would dissipate rapidly from the source within an increase in distance. While the project would be constructed over an approximately 3-year period, these types of odor-generating activities would not occur at any single location or for an extended period of time. Construction and operation of the project would not result in odors that would affect a substantial number of people. No applicable APMs or BMPs are proposed as part of the project. This impact would be **less than significant**.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife or the 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, or regulations or by the California Department of Fish and Wildlife or the 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

3.4.1 Environmental Setting

The following environmental setting summarizes results reported in a biological resources technical report prepared by LSPGC for the project and reviewed by Ascent (Insignia Environmental 2024). The biological resources technical report is provided as Appendix E. The environmental setting describes land cover within the project “alignment area” and the “survey area” (i.e., the project alignment area and an approximately 350-foot buffer) (Insignia Environmental 2024), special-status species’ potential for occurrence in the survey area, and potential state and federally protected wetlands in the survey area. The survey area encompasses the area of direct and indirect physical impacts that could occur as a result of project implementation. Impacts on some biological resources (e.g., special-status birds) may occur at greater distances and are not limited to the survey area; a larger area is considered in the evaluation of these resources, and this area is described, where applicable, in the impact analysis below.

Insignia Environmental, on behalf of LSPGC, visited the survey area on October 17 and 18, November 6 to 8, and November 13, 2023, to characterize existing conditions and identify potential biological resources (e.g., habitat for special-status species, sensitive natural communities, waters of the United States and state) that may occur (Insignia Environmental 2024). Insignia Environmental biologists conducted surveys within accessible portions of the project alignment area and an alternative alignment that is not part of this project. Additionally, a large portion of the survey area was not surveyed due to access restrictions (Insignia Environmental 2024). Therefore, land cover in the survey area is described qualitatively below, and unsurveyed areas were assessed using aerial imagery. As a result, the land cover described below is not entirely consistent with the biological resources technical report but is the most accurate information available for the proposed project alignment area.

An additional site visit was conducted on March 27, 2024, by an Ascent biologist on behalf of the CPUC to verify the information presented in the biological resources technical report and objectively assess the proposed project alignment area. Additionally, Ascent conducted an updated search of the California Natural Diversity Database (CNDDDB) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants within the U.S. Geological Survey (USGS) 7.5-minute quadrangles including and surrounding the project alignment area (CNDDDB 2024; CNPS 2024), and obtained a list of species that may be affected by activities implemented in the project alignment area from the USFWS Information for Planning and Consultation online tool (USFWS 2024).

LAND COVER

Most of the survey area is composed of agricultural lands, both active and inactive, with steep hills in the western region that are heavily grazed by cattle. The survey area crosses a major highway, Interstate 5 (I-5), which runs north to south. Land cover types present in the survey area are described below.

Active Agriculture

Active agriculture, which is land that is farmed, harvested, or tended, constitutes most of the survey area. Areas where recent crop harvest or soil tilling was evident during surveys were also included in this land cover type. This land cover type consists largely of almond orchards, specifically the nonpareil varieties (*Prunus dulcis*). Active agriculture in the survey area also contains pomegranate (*Punica granatum*) orchards, hemp (*Cannabis sativa*) fields, cotton (*Gossypium* spp.) fields, and grape (*Vitis vinifera*) vineyards. This land cover type covers most of the accessible survey area east of PG&E's existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines. During the March 27, 2024, site visit, some of the agricultural fields contained greater densities of native *Amsinckia* spp. and *Phacelia* spp. than the habitats described below.

Annual Grassland: *Amsinckia (menziesii, tessellata)*-*Phacelia* spp. Herbaceous Alliance

The *Amsinckia*-*Phacelia* alliance is also considered annual grassland habitat. It can be found in upland slopes, broad valleys, grazed or recently burned hills, and fallow fields with generally well-draining and loamy soils. This vegetation community is often subject to frequent bioturbation (i.e., the reworking of soils and sediments by animals or plants). Typically, fiddlenecks (*Amsinckia* spp.) or phacelia (*Phacelia* spp.) are codominant or seasonally characteristic of the alliance, making up at least 50 percent of the herbaceous layer. Fiddlenecks (var. *menziesii*, *tessellata*) and phacelia (*Phacelia ciliate*, *Phacelia distans*, *Phacelia tanacetifolia*) are accompanied by squirreltail fescue (*Vulpia bromoides*), red brome (*Bromus rubens*), and ripgut brome (*Bromus diandrus*). The *Amsinckia*-*Phacelia* alliance is found in the westernmost portion of the accessible survey area near PG&E's existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines.

Annual Grassland: *Avena* spp. -*Bromus* spp. Herbaceous Semi-Natural Alliance

The *Avena* spp. and *Bromus* spp. seminatural alliance is also considered annual grassland habitat. It occurs in foothills, rangelands, and openings in woodlands. Wild oat (*Avena* spp.) and brome grasses (*Bromus* spp.) make up the dominant or characteristic species of the herbaceous layer, comprising at least 50 percent of the cover collectively. In low cover, emergent trees and shrubs may be present. Some nonnative species that may also be codominant are Australian saltbush (*Atriplex semibaccata*) and barley (*Hordeum* spp.). This alliance is found in the westernmost

portion of the accessible survey area near PG&E's existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500-kV transmission lines.

Developed

Developed areas are highly modified and contain some form of human-constructed infrastructure. Maintained paved roads, highways, or buildings may be included in this land cover type. Within the survey area, developed land cover is found along the I-5 corridor and the California Aqueduct.

Disturbed

Disturbed areas are those areas that have been changed from their natural state by human influence. This cover type lacks vegetation and includes all dirt roads, unmaintained paved roads, cleared areas, barren pasturelands, and agricultural plots with no evidence of recent activity. Potential vegetation, if any, that may grow in this cover type includes Russian thistle (*Salsola tragus*), brome grasses, wild oat, fiddlenecks, or phacelia; however, vegetation cover is below 5 percent and, therefore, does not meet the criteria to be classified as a vegetation community or alliance. Disturbed areas were observed throughout the survey area as most agricultural plots are segregated by dirt roads, which are disturbed; however, most of the disturbed land cover was found in the westernmost portion of the survey area near PG&E's existing Los Banos-Midway #2 500-kV and Los Banos-Gates #1 500-kV transmission lines and the proposed substation site.

Unsurveyed Areas

Portions of the survey area that could not be accessed during field visits largely contain agricultural and disturbed land cover types based on review of aerial imagery. However, some areas may contain grassland and a small area east of I-5 where the project alignment area crosses the highway appears to contain shrubs based on review of aerial imagery. It is possible that this area may be dominated by nonnative Russian thistle; however, it also may contain native scrub habitat.

AQUATIC FEATURES

Insignia Environmental conducted a preliminary assessment of water features potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW on October 17 and 18, November 6 to 8, and November 13, 2023 (Insignia Environmental 2024). Six potentially jurisdictional water features were identified within the survey area. Four of the potentially jurisdictional water features are ephemeral streams located in the western region of the survey area near PG&E's existing Los Banos-Midway #2 500 kV and Los Banos-Gates #1 500 kV transmission lines. The remaining two are agricultural ditches located along West Manning Avenue (Insignia Environmental 2024).

Additionally, the California Aqueduct would be crossed by the proposed PG&E 230 kV Reconductoring and the proposed LSPGC 230 kV transmission line between South Douglas Avenue and South Lyon Avenue. The California Aqueduct falls under the jurisdiction of the California Department of Water Resources.

SPECIAL-STATUS SPECIES

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that are in one or more of the following categories, regardless of their legal or protection status:

- ▶ officially listed by California or the federal government as endangered, threatened, or rare;
- ▶ a candidate for state or federal listing as endangered or threatened;
- ▶ taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in State CEQA Guidelines Section 15380;
- ▶ species identified by the CDFW as species of special concern;

- ▶ species listed as fully protected under the California Fish and Game Code;
- ▶ species afforded protection under local planning documents; and
- ▶ taxa considered by the CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR). The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, summarized as follows:
 - CRPR 1A - Plants presumed to be extinct in California;
 - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A – Plants presumed extirpated in California but common elsewhere;
 - CRPR 2B - Plants that are rare, threatened, or endangered in California but more common elsewhere;
 - CRPR 3 - Plants about which more information is needed (a review list); and
 - CRPR 4 - Plants of limited distribution (a watch list).

Of the 31 special-status plant species that are known to occur in the vicinity of the survey area, 10 species were determined to have potential to occur in the survey area based on the presence of habitat suitable for the species (CNDDDB 2024; CNPS 2024; Insignia Environmental 2024; Table 3.4-1). Of the 36 special-status wildlife species that could occur in the vicinity of the survey area, 19 species were determined to have potential to occur in the survey area based on the presence of habitat suitable for the species, either mapped during surveys (Insignia Environmental 2024) or based on review of aerial imagery in unsurveyed areas (CNDDDB 2024; Table 3.4-2). Tables 3.4-2 and 3.4-3 provide lists of the special-status plant and special-status wildlife species, respectively, that have been documented in the 15 USGS quadrangles including and surrounding the survey area. The tables describe the species’ regulatory status, habitat, and potential for occurrence in the survey area.

Table 3.4-1 Special-Status Plant Species Known to Occur in the Vicinity of the Survey Area and Their Potential for Occurrence in the Survey Area

Species	Federal Listing Status ¹	State Listing Status ¹	CRPR	SJVHCP	Habitat	Potential for Occurrence
San Benito onion <i>Allium howellii</i> var. <i>sanbenitense</i>	—	—	1B.3	—	Chaparral, valley and foothill grassland. Openings. Clay, often steep slopes. 1,280–4,165 feet in elevation. Blooms April–June. Geophyte.	Not expected to occur. The project alignment area is outside of the known geographic range of this species.
Jepson's milk-vetch <i>Astragalus rattanii</i> var. <i>jepsonianus</i>	—	—	1B.2	—	Commonly on serpentine in grassland or openings in chaparral. 575–3,295 feet in elevation. Blooms March–June. Annual.	Not expected to occur. The project alignment area does not contain serpentine soils as mapped by USDA Natural Resources Conservation Service (NRCS). Furthermore, the project alignment area is outside of the known geographic range of this species.
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	—	—	1B.2	—	Alkaline flats and scalds in the Central Valley, sandy soils. 10–900 feet in elevation. Blooms April–October. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
Lost Hills crownscale <i>Atriplex coronata</i> var. <i>vallicola</i>	—	—	1B.2	—	Chenopod scrub, valley and foothill grassland, vernal pools. In powdery, alkaline soils that are vernal moist with <i>Frankenia</i> , <i>Atriplex</i> spp. and <i>Distichlis</i> . 150–2,905 feet in elevation. Blooms April–September. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.

Species	Federal Listing Status ¹	State Listing Status ¹	CRPR	SJVHCP	Habitat	Potential for Occurrence
Brittlescale <i>Atriplex depressa</i>	—	—	1B.2	—	Usually in alkali scalds or alkaline clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. 5–1,065 feet in elevation. Blooms April–October. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
Lesser saltscale <i>Atriplex minuscula</i>	—	—	1B.1	SJVHCP	Chenopod scrub, playas, valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. 0–740 feet in elevation. Blooms May–October. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
San Benito evening-primrose <i>Camissonia benitensis</i>	FD	—	1B.1	—	Chaparral, cismontane woodland, valley and foothill grassland. On gravelly serpentine alluvial terraces. 1,590–4,710 feet in elevation. Blooms April–June. Annual.	Not expected to occur. The project alignment area does not contain serpentine soils as mapped by NRCS.
Palmate-bracted bird's-beak <i>Chloropyron palmatum</i>	FE	SE	1B.1	—	Chenopod scrub, valley and foothill grassland, meadow and seep, wetland. Usually on Pescadero silty clay which is alkaline. 15–510 feet in elevation. Blooms May–October. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
Hall's tarplant <i>Deinandra halliana</i>	—	—	1B.2	—	Reported from a variety of substrates including clay, sand, and alkaline soils. 510–2,985 feet in elevation. Blooms April–May. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Recurved larkspur <i>Delphinium recurvatum</i>	—	—	1B.2	—	On alkaline soils; often in valley saltbush or valley chenopod scrub. 10–2,590 feet in elevation. Blooms March–June. Perennial.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Western Heermann's buckwheat <i>Eriogonum heermannii</i> var. <i>occidentale</i>	—	—	1B.2	—	Often on serpentine alluvium or on roadsides; rarely on clay or shale slopes. 1,345–2,640 feet in elevation. Blooms July–October. Perennial.	Not expected to occur. The project alignment area does not contain serpentine soils (as mapped by NRCS) or clay or shale slopes.
San Joaquin spearscale <i>Extriplex joaquinana</i>	—	—	1B.2	—	In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , and <i>Frankenia</i> spp. 5–2,740 feet in elevation. Blooms April–October. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.

Species	Federal Listing Status ¹	State Listing Status ¹	CRPR	SJVHCP	Habitat	Potential for Occurrence
Talus fritillary <i>Fritillaria falcata</i>	—	—	1B.2	—	On shale, granite, or serpentine talus. 1,395–4,710 feet in elevation. Blooms March–May. Geophyte.	Not expected to occur. The project alignment area does not contain serpentine soils (as mapped by NRCS, or shale or granite substrates).
San Benito fritillary <i>Fritillaria viridea</i>	—	—	1B.2	—	Serpentine slopes. Sometimes on rocky streambanks. 1200–4,460 feet in elevation. Blooms March–May. Geophyte.	Not expected to occur. The project alignment area does not contain serpentine soils as mapped by NRCS.
Vernal barley <i>Hordeum intercedens</i>	—	—	3.2	—	Vernal pools, dry, saline streambeds, alkaline flats. 15–3,280 feet in elevation. Blooms March–June. Annual.	Not expected to occur. The project alignment area is outside of the known geographic range of this species.
Diablo Range hare-leaf <i>Lagophylla diabolensis</i>	—	—	1B.2	—	Cismontane woodland, valley and foothill grassland. Clay. 1,200–2,905 feet in elevation. Blooms April–September. Annual.	Not expected to occur. The project alignment area is outside of the known geographic range of this species.
Alkali-sink goldfields <i>Lasthenia chrysantha</i>	—	—	1B.1	—	Vernal pools. Alkaline. 0–655 feet in elevation. Blooms February–June. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
Rayless layia <i>Layia discoidea</i>	—	—	1B.1	—	On serpentine alluvium and serpentine talus. 2,610–5,200 feet in elevation. Blooms May. Annual.	Not expected to occur. The project alignment area does not contain serpentine soils as mapped by NRCS.
Pale-yellow layia <i>Layia heterotricha</i>	—	—	1B.1	SJVHCP	Alkaline or clay soils; open areas. 295–5,905 feet in elevation. Blooms March–June. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia</i> – <i>Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Munz's tidy-tips <i>Layia munzii</i>	—	—	1B.2	—	Hillsides, in white-gray alkaline clay soils, w/grasses and chenopod scrub associates. 490–2,295 feet in elevation. Blooms March–April. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia</i> – <i>Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Panoche pepper-grass <i>Lepidium jaredii</i> ssp. <i>album</i>	—	—	1B.2	SJVHCP	White or gray clay lenses on steep slopes; incidental in alluvial fans and washes. Clay and gypsum-rich soils. 215–3,000 feet in elevation. Blooms February–June. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia</i> – <i>Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.

Species	Federal Listing Status ¹	State Listing Status ¹	CRPR	SJVHCP	Habitat	Potential for Occurrence
Showy golden madia <i>Madia radiata</i>	—	—	1B.1	SJVHCP	Mostly on adobe clay in grassland or among shrubs. 245–4,005 feet in elevation. Blooms March–May. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Indian Valley bush-mallow <i>Malacothamnus aboriginum</i>	—	—	1B.2	—	Granitic outcrops and sandy bare soil, often in disturbed soils. 490–3,705 feet in elevation. Blooms April–October. Perennial.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
Palmer's monardella <i>Monardella palmeri</i>	—	—	1B.2	—	On serpentine, often found associated with Sargent cypress forests. 655–2,625 feet in elevation. Blooms June–August. Geophyte.	Not expected to occur. The project alignment area does not contain serpentine soils as mapped by NRCS.
San Joaquin woollythreads <i>Monolopia congdonii</i>	FE	—	1B.2	SJVHCP	Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. 180–2,755 feet in elevation. Blooms February–May. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	—	—	1B.2	—	Apparently in grassland, and not necessarily in vernal pools. 195–3,200 feet in elevation. Blooms April–July. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance in the project alignment area, as well as agricultural areas that contain native vegetation.
Panoche navarretia <i>Navarretia panochensis</i>	—	—	1B.3	—	Chenopod scrub, valley and foothill grassland. Clay, often gravelly. 1,080–2,820 feet in elevation. Blooms April–June. Annual.	Not expected to occur. The project alignment area is outside of the known geographic range of this species.
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	—	—	1B.2	—	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 10–4,050 feet in elevation. Blooms April–July. Annual.	Not expected to occur. The project alignment area is outside of the known geographic range of this species.
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	—	—	1B.2	—	Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. 1,985–4,415 feet in elevation. Blooms April–May. Annual.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	—	—	1B.2	—	In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2,135 feet in elevation. Blooms May–October. Geophyte.	Not expected to occur. Habitat suitable for this species is not present in the project alignment area.

Species	Federal Listing Status ¹	State Listing Status ¹	CRPR	SJVHCP	Habitat	Potential for Occurrence
Chaparral ragwort <i>Senecio aphanactis</i>	—	—	2B.2	—	Drying alkaline flats. 65–2,805 feet in elevation. Blooms January–April. Annual.	May occur. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance, <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance, and dry lake/mudflats/playa habitat in the project alignment area, as well as agricultural areas that contain native vegetation.

Notes: CRPR = California Rare Plant Rank; CEQA = California Environmental Quality Act; ESA = Endangered Species Act; SJVHCP = San Joaquin Valley Habitat Conservation Plan.

¹ Legal Status Definitions

Federal:

FE Federally listed as endangered (legally protected by the ESA)

FD Federally delisted

State:

SE State listed as endangered (legally protected by CESA)

California Rare Plant Ranks (CRPR):

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under the ESA or CESA)

2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under the ESA or CESA)

3 Plant species that lack the necessary information to assign them to one of the other ranks or to reject them; most species in this category are taxonomically problematic (most are protected under CEQA, but not legally protected under the ESA or CESA)

CRPR Threat Ranks:

0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)

0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Sources: CNDDDB 2024; CNPS 2024; Insignia Environmental 2024.

Table 3.4-2 Special-Status Wildlife Species Known to Occur in the Vicinity of the Survey Area and Their Potential for Occurrence in the Survey Area

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
Amphibians and Reptiles					
Blunt-nosed leopard lizard <i>Gambelia sila</i>	FE	SE FP	SJVHCP	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	May occur. The project alignment area is within the geographic range of this species. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
California glossy snake <i>Arizona elegans occidentalis</i>	—	SSC	—	Patchily distributed from the eastern portion of San Francisco bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	May occur. The project alignment area is within the geographic range of this species. Habitat potentially suitable for this species is present in the <i>Amsinckia–Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
California red-legged frog <i>Rana draytonii</i>	FT	SSC	SJVHCP	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not expected to occur. The project alignment area is outside of the geographic range of this species.
California tiger salamander - central California DPS <i>Ambystoma californiense</i> pop. 1	FT	ST	SJVHCP	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not expected to occur. The project alignment area is outside of the geographic range of this species.
Coast horned lizard <i>Phrynosoma blainvillii</i>	—	SSC	—	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	May occur. The project alignment area is within the geographic range of this species. Habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Foothill yellow-legged frog (Central Coast DPS) <i>Rana boylei</i> pop. 4	FT	SE	—	San Francisco Peninsula and Diablo Range south of San Francisco Bay Estuary, and south through the Santa Cruz and Gabilan Mountains east of the Salinas River in the southern inner Coast Ranges. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Not expected to occur. The project alignment area is within the geographic range of this species; however, aquatic habitat suitable for this species is not present in the project alignment area.
Giant gartersnake <i>Thamnophis gigas</i>	FT	ST	SJVHCP	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. The project alignment area is within the geographic range of this species; however, aquatic habitat suitable for this species is not present in the project alignment area.
Northern California legless lizard <i>Anniella pulchra</i>	—	SSC	—	Sandy or loose loamy soils under sparse vegetation. Forages at the base of shrubs or other vegetation either on the surface or just below it in leaf litter or sandy soil. Soil moisture is essential. Prefers soils with a high moisture content. Found primarily in areas with sandy or loose organic soils or where there is plenty of leaf litter.	Not expected to occur. The project alignment area is within the geographic range of this species; however, the project alignment area does not contain habitat (i.e., shrub, leaf litter) suitable for this species.
Northwestern pond turtle <i>Actinemys marmorata</i>	FP	SSC	—	Ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to approximately 0.3 miles (0.5 km) from water for egg-laying.	Not expected to occur. The project alignment area is within the geographic range of this species; however, aquatic habitat suitable for this species is not present in the project alignment area.

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	—	SSC	—	Chenopod scrub, valley and foothill grassland. Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and oviposition sites.	May occur. The project alignment area is within the geographic range of this species. Habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Two-striped gartersnake <i>Thamnophis hammondi</i>	—	SSC	—	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Not expected to occur. The project alignment area is outside of the geographic range of this species and does not contain riparian habitat or streams.
Western spadefoot <i>Spea hammondi</i>	FP	SSC	—	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, and wetlands. Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	May occur. The project alignment area is within the geographic range of this species. Upland habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.

Birds

Burrowing owl <i>Athene cunicularia</i>	—	SC SSC	SJVHCP	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	May occur. The project alignment area is within the geographic range of this species. Nesting habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
California condor <i>Gymnogyps californianus</i>	FE	SE FP	—	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Not expected to occur. The project alignment area is within the geographic range of this species; however, the project alignment area does not contain nesting habitat for this species and foraging habitat in the project alignment area is marginal.
Golden eagle <i>Aquila chrysaetos</i>	—	FP	SJVHCP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	May occur. The project alignment area is within the geographic range of this species. Nesting habitat is not present in the project alignment area; however, foraging habitat suitable for this species is present throughout the project alignment area.
Loggerhead shrike <i>Lanius ludovicianus</i>	—	SSC	—	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	May occur. The project alignment area is within the geographic range of this species. Nesting habitat (e.g., Russian thistle) and foraging habitat suitable for this species is present throughout the project alignment area.

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
Mountain plover <i>Charadrius montanus</i>	—	SSC	—	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents.	May occur. The project alignment area is within the geographic range of this species. The project alignment area overlaps the overwintering range for this species. Habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Northern harrier <i>Circus hudsonius</i>	—	SSC	—	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	May occur. The project alignment area is within the geographic range of this species. Nesting and foraging habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Short-eared owl <i>Asio flammeus</i>	—	SSC	—	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	May occur. The project alignment area is within the geographic range of this species. Nesting and foraging habitat potentially suitable for this species is present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Swainson's hawk <i>Buteo swainsoni</i>	—	ST	SJVHCP	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. The project alignment area is within the geographic range of this species. Nesting and foraging habitat suitable for this species (including agricultural land cover) is present in and adjacent to the project alignment area.
Tricolored blackbird <i>Agelaius tricolor</i>	—	ST SSC	SJVHCP	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	May occur. The project alignment area is within the geographic range of this species. Nesting habitat is not present in the project alignment area; however, foraging habitat suitable for this species is present throughout the project alignment area.
Invertebrates					
Crotch's bumble bee <i>Bombus crotchii</i>	—	SC	—	Found primarily in California: mediterranean, Pacific coast, western desert, Great Valley, and adjacent foothills through most of southwestern California. Habitat includes open grassland and scrub. Nests underground.	May occur. The project alignment area is within the geographic range of this species. Nesting and foraging habitat potentially suitable for this species is present in the project alignment area.
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE	—	—	Endemic to the eastern margin of the Central Coast mountains in seasonally astatic grassland vernal pools. Inhabit small, clear-water depressions in sandstone and clear-to-turbid clay/grass-bottomed pools in shallow swales.	Not expected to occur. The project alignment area is within the geographic range of this species; however, vernal pool habitat is not present in the project alignment area.

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
Monarch <i>Danaus plexippus</i>	FC	—	—	Habitat requirements include host plants for larvae (primarily milkweeds [<i>Asclepias</i> spp.]); adult nectar sources (i.e., flowering plants); and sites for roosting, thermoregulation, mating, hibernation, and predator escape. Additionally, monarch butterfly requires conditions and resources for initiating and completing migration both to and from winter roosting areas. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	May occur. The project alignment area is within the geographic range of this species. The project alignment area is outside of the overwintering range of this species; however, foraging and breeding habitat may be present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	—	SJVHCP	Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2–8 inches in diameter; some preference shown for "stressed" elderberries.	Not expected to occur. The project alignment area is outside of the geographic range of this species.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	—	SJVHCP	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The project alignment area is within the geographic range of this species; however, vernal pool habitat is not present in the project alignment area.
Mammals					
American badger <i>Taxidea taxus</i>	—	SSC	—	American badgers are most commonly found in treeless areas including tallgrass and shortgrass prairies, grass-dominated meadows and fields within forested habitats, and shrub-steppe communities. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	May occur. The project alignment area is within the geographic range of this species. Habitat suitable for this species may be present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Fresno kangaroo rat <i>Dipodomys nitratoideis exilis</i>	FE	SE	—	Chenopod scrub. Alkali sink-open grassland habitats in western Fresno County. Bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.	Not expected to occur. While the project alignment area is within the historic range of this species, recently, Fresno kangaroo rats have been found only in alkali sink communities from 200 to 300 feet in elevation, and there are no known current populations within the historic geographic range in Merced, Madera, and Fresno counties.

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
Giant kangaroo rat <i>Dipodomys ingens</i>	FE	SE	SJVHCP	Chenopod scrub, valley and foothill grassland. Annual grasslands on the western side of the San Joaquin Valley, marginal habitat in alkali scrub. Need level terrain and sandy loam soils for burrowing.	May occur. The project alignment area is within the geographic range of this species. Habitat suitable for this species may be present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Nelson's (=San Joaquin) antelope squirrel <i>Ammospermophilus nelsoni</i>	—	ST	SJVHCP	Western San Joaquin Valley from 200-1,200 feet in elevation. On dry, sparsely vegetated loam soils. Dig burrows or use kangaroo rat burrows. Need widely scattered shrubs, forbs and grasses in broken terrain with gullies and washes	May occur. The project alignment area is within the geographic range of this species. Habitat suitable for this species may be present in the <i>Amsinckia-Phacelia</i> alliance and <i>Avena</i> spp. and <i>Bromus</i> spp. semi-natural alliance habitat in the project alignment area.
Pallid bat <i>Antrozous pallidus</i>	—	SSC	—	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Tree roosting has also been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and bole cavities in oaks. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not expected to occur. The project alignment area is within the geographic range of this species; however, roosting habitat suitable for this species is not present in the project alignment area.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE	ST	SJVHCP	Chenopod scrub, valley and foothill grassland. Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	May occur. The project alignment area is within the geographic range of this species. Foraging habitat suitable for this species is present in grassland habitat in the project alignment area and burrows suitable for occupation were observed during the survey (Insignia Environmental 2024).
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	—	SSC	—	Throughout California in a wide variety of habitats. Most common in mesic sites. Requires large cavities for roosting, which may include abandoned buildings and mines, caves, and basal cavities of trees. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not expected to occur. The project alignment area is within the geographic range of this species; however, roosting habitat suitable for this species is not present in the project alignment area.
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	—	SSC	—	Tulare grasshopper mice typically inhabit arid shrubland communities in hot, arid grassland and shrubland associations. Hot, arid valleys and scrub deserts in the southern San Joaquin Valley. Diet almost exclusively composed of arthropods, therefore needs abundant supply of insects.	May occur. The project alignment area is within the geographic range of this species. Scrub habitat suitable for this species may be present in unsurveyed portions of the project alignment area, and grassland habitat in the western end of the alignment may provide habitat suitable for the species.

Species	Federal Listing Status ¹	State Listing Status ¹	SJVHCP	Habitat	Potential for Occurrence
Western mastiff bat <i>Eumops perotis californicus</i>	—	SSC	—	Found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests. The distribution of this species is likely geomorphically determined, with the species being present only where there are significant rock features offering roosting habitat.	Not expected to occur. The project alignment area is within the geographic range of this species; however, roosting habitat suitable for this species is not present in the project alignment area.
Western red bat <i>Lasiurus frantzii</i>	—	SSC	—	Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Not expected to occur. The project alignment area is within the geographic range of this species; however, roosting habitat suitable for this species is not present in the project alignment area.

Notes: CNDDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act; DPS = distinct population segment; ESA = Endangered Species Act; SJMSCP = San Joaquin County Multi-Species Habitat Conservation and Open Space Plan; SJVHCP = San Joaquin Valley Habitat Conservation Plan.

1 Legal Status Definitions

Federal:

FE Federally listed as endangered (legally protected)
 FT Federally listed as threatened (legally protected)
 FC Candidate for listing under the ESA
 FP Proposed for listing under the ESA
 FD Federally delisted

State:

FP Fully protected (legally protected)
 SSC Species of special concern (no formal protection other than CEQA consideration)
 SE State listed as endangered (legally protected)
 ST State listed as threatened (legally protected)
 SC State candidate for listing (legally protected)

Sources: CNDDDB 2024; Insignia Environmental 2024; USFWS 2024.

3.4.2 Regulatory Setting

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S. Code [USC] Section 1531 et seq.), the USFWS regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species on private property, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

Section 10 of the ESA applies if a nonfederal agency is the lead agency for an action that results in take and no federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with the USFWS.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration if such destruction or alteration does not result in a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act, enacted in 1940 and amended multiple times since, prohibits the taking of bald and golden eagles without a permit from the Secretary of the Interior. Similar to the ESA, the Bald and Golden Eagle Protection Act defines "take" to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (16 USC Sections 668–668c). According to the act, disturbance that would injure an eagle, decrease productivity, or cause nest abandonment, including habitat alterations that could have these results, are considered take and can result in civil or criminal penalties.

Clean Water Act

Section 404 of the Clean Water Act (CWA) requires project applicants to obtain a permit from USACE before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including some wetlands. Waters of the United States include navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent (i.e., having a continuous surface connection) to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate state agency, which in California is the State Water Resources Control Board or designated RWQCB, indicating that the action would uphold state water quality standards.

STATE

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from the CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but does not include "harm" or "harass," as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 Incidental Take Permit.

California Fish and Game Code Sections 3503 and 3503.5—Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

Fully Protected Species under the California Fish and Game Code

Regulation of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take (as defined under CESA) or possession of fully protected species and do not provide for authorization of incidental take.

California Fish and Game Code Section 1602—Lake and Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to regulation by the CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do any of the following without first notifying the CDFW:

- ▶ substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake; or
- ▶ deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation (California Code of Regulations Title 14, Section 1.72). CDFW jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife. A lake and streambed alteration agreement must be obtained for any diversion or alteration that would substantially adversely affect a fish or wildlife resource in a river, stream, or lake.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.) allows the California Fish and Game Commission to designate plants as rare or endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under the NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of the CDFW, for vegetation removal from canals, roads, and other building sites, changes in land use, and other situations.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act), waters of the state fall under the jurisdiction of the appropriate RWQCB. Waters located in the survey area are under the jurisdiction of the Central Valley RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters and areas that meet the definition of "waters of the state," including waters meeting the state definition of a wetland. Waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. Under the state definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater or shallow surface water or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area either lacks vegetation or the vegetation is dominated by hydrophytes.

RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 of the CWA provided they meet the definition of waters of the state. The California Water Code generally regulates more substances contained in discharges and defines discharges to receiving waters more broadly than does the CWA. In addition, waters of the state cover a broader range of aquatic habitats than the CWA, including ephemeral streams and wetlands. Actions that affect waters of the state, including wetlands, must meet the RWQCB waste discharge requirements and compensatory mitigation is required if state protected wetlands would be filled. This issue is addressed with respect to state-protected wetlands and associated biological resources in this section. Water quality and beneficial uses of waters of the state are addressed comprehensively in Section 3.10, "Hydrology and Water Quality."

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. However, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024) includes the following policies that are relevant to the biological resources affected by the project:

- ▶ **OS-D.1: No-Net-Loss Wetlands Policy.** The County shall support the “no-net-loss” wetlands policies of the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Wildlife. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.
- ▶ **OS-D.2: Wetland Loss Mitigation.** The County shall require new development to fully mitigate wetland loss for function and value in regulated wetlands to achieve “no-net-loss” through any combination of avoidance, minimization, or compensation. The County shall support mitigation banking programs that provide the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.
- ▶ **OS-D.3. Adjacent Wetland Protection:** 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.
- ▶ **OS-D.5: Upland Habitat Protection.** The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.
- ▶ **OS-E.1: Avoid Habitat Loss.** 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 Wildlife 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.
- ▶ **OS-E.2: Construction Buffers.** The County shall require adequate buffer zones between construction activities and significant wildlife resources, including both onsite habitats that are purposely avoided and significant habitats that are adjacent to the project site, in order to avoid the degradation and disruption of critical life cycle activities such as breeding and feeding. The width of the buffer zone should vary depending on the location, species, etc. A final determination shall be made based on informal consultation with the U.S. Fish and Wildlife Service and/or the California Department of Fish and Wildlife.

- ▶ **OS-E.3: Wildlife Habitat Protection.** 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.
- ▶ **OS-E.4: Wildlife Habitat Management Practices.** The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by the California Department of Fish and Wildlife officials and the U.S. Fish and Wildlife Service.
- ▶ **OS-E.6: Habitat Corridors.** The County shall ensure the conservation of large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife populations, as long as this preservation does not threaten the economic well-being of the county.
- ▶ **OS-E.9: Biological Resource Evaluation.** 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 on 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.
- ▶ **OS-E.13: Habitat Protection.** The County should protect to the maximum extent practicable wetlands, riparian habitat, and meadows since they are recognized as essential habitats for birds and wildlife
- ▶ **OS-E.17: Endangered Species Habitat.** The County should preserve, to the maximum possible extent, areas defined as habitats for rare or endangered animal and plant species in a natural state consistent with State and Federal endangered species laws.
- ▶ **OS-E.19: Nesting Birds.** For development projects on sites where tree or vegetation/habitat removal is necessary and where the existence of sensitive species and/or bird species protected by California Fish and Wildlife Code Sections 3503 and 3503.5 and Migratory Bird Treaty Act has been determined by a qualified biologist, surveys for nesting birds shall be conducted within 14 days prior to project activities by a qualified biologist retained by the developer for all construction sites where activities occurring during nesting bird season (February 1 through September 15). The surveys shall include the entire disturbance area plus at least a 500-foot buffer around the project site.
- ▶ **OS-F.4: Landmark Trees.** The County shall ensure that landmark trees are preserved and protected whenever possible.
- ▶ **OS-F.5: Rare, Threatened, and Endangered Species.** The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects. As part of this process, the County shall require, as part of the environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based on field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant plant resources and/or special-status plant species. Such evaluation shall consider the potential for significant impact on these resources and shall either identify feasible mitigation measures or indicate why mitigation is not feasible.
- ▶ **OS-F.8: Vegetation for Wildlife.** 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.

APPLICABLE MITIGATION PROGRAMS

PG&E's San Joaquin Valley Habitat Conservation Plan

PG&E's San Joaquin Valley Habitat Conservation Plan (SVHCP) covers operation and maintenance of PG&E's existing electric and gas transmission and distribution infrastructure in the nine-county area encompassing the San Joaquin

Valley. The SJVHCP covers 23 wildlife and 42 plant species, some of which may occur in the survey area. The proposed project is located within the boundaries of the SJVHCP. While construction of the proposed project is not a covered activity under the SJVHCP, PG&E's operation and maintenance activities of its components of the proposed project, including inspections and electrical system tower replacement or repair would be covered activities (PG&E 2007). The SJVHCP includes 15 avoidance and minimization measures (AMMs) that would be implemented by PG&E during all operation and maintenance activities as part of this proposed project. Nineteen additional AMMs are included in the SJVHCP; AMMs 18, 19, 22, and 23 would apply to O&M activities associated with the project.

Applicable SJVHCP AMMs are listed below:

- ▶ **AMM 1:** Employees and contractors performing O&M activities will receive ongoing environmental education. Training will include review of environmental laws and guidelines that must be followed by all personnel to reduce or avoid effects on covered species during O&M activities.
- ▶ **AMM 2:** Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
- ▶ **AMM 3:** The development of new access and ROW roads by PG&E will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable
- ▶ **AMM 4:** Vehicles will not exceed a speed limit of 15 mph in the ROWs or on unpaved roads within sensitive land-cover types.
- ▶ **AMM 5:** Trash dumping, firearms, open fires (such as barbecues) not required by the O&M activity, hunting, and pets (except for safety in remote locations) will be prohibited in O&M work activity sites.
- ▶ **AMM 6:** No vehicles will be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area is constructed.
- ▶ **AMM 7:** During any reconstruction of existing overhead electric facilities in areas with a high risk of wildlife electrocution (e.g., nut/fruit orchards, riparian corridors, areas along canal or creek banks, PG&E's raptor concentration zone [RCZ]), PG&E will use insulated jumper wires and bird/animal guards for equipment insulator bushings or will construct lines to conform to the latest revision of PG&E's Bird and Wildlife Protection Standards.
- ▶ **AMM 8:** During fire season in designated State Responsibility Areas (SRAs), all motorized equipment will have federal or state approved spark arrestors; a backpack pump filled with water and a shovel will be carried on all vehicles; and fire-resistant mats and/or windscreens will be used when welding. In addition, during fire "red flag" conditions as determined by California Department of Forestry (CDF), welding will be curtailed, each fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C, and all equipment parking and storage areas will be cleared of all flammable materials.
- ▶ **AMM 9:** Erosion control measures will be implemented where necessary to reduce erosion and sedimentation in wetlands, waters of the United States, and waters of the state, and habitat occupied by covered animal and plant species when O&M activities are the source of potential erosion problems.
- ▶ **AMM 10:** If an activity disturbs more than 0.25 acre in a grassland, and the landowner approves or it is within PG&E rights and standard practices, the area should be returned to pre-existing conditions and broadcast-seeded using a commercial seed mix. Seed mixtures/straw used for erosion control on projects of all sizes within grasslands will be certified weed-free. PG&E shall not broadcast seed (or apply in other manner) any commercial seed or seed-mix to disturbance sites within other natural land-cover types, within any vernal pool community, or within occupied habitat for any plant covered-species.
- ▶ **AMM 11:** When routine O&M activities are conducted in an area of potential Valley Elderberry Longhorn Beetle (VELB) habitat, a qualified individual will survey for the presence of elderberry plants within a minimum of 20 feet from the worksite. If elderberry plants have one or more stems measuring 1 inch or more in diameter at ground level are present, the qualified individual will flag those areas to avoid or minimize potential impacts on elderberry plants. If impacts (pruning/trimming, removal, ground disturbance or damage) are unavoidable or occur, then additional measures identified in the VELB conservation plan and compliance brochure will be

implemented. The VELB compliance brochure must be carried in all vehicles performing O&M activities within the potential range of VELB.

- ▶ **AMM-18:** If western burrowing owls are present at the site, a qualified biologist will work with O&M staff to determine whether an exclusion zone of 160 feet during the nonnesting season and 250 feet during the nesting season can be established. If it cannot, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.
- ▶ **AMM-19:** If a Swainson's hawk nest or white-tailed kite nest is known to be within 0.25 miles of a planned worksite, a qualified biologist will evaluate the effects of the planned O&M activity. If the biologist determines that the activity would disrupt nesting, a buffer and limited operation period (LOP) during the nesting season (March 15–June 30) will be implemented. Evaluations will be performed in consultation with the local Department of Fish and Game (DFG) representative.
- ▶ **AMM-22:** All vegetation management activities will implement the nest-protection program to avoid and minimize effects on Swainson's hawk, white-tailed kite, golden eagle, bald eagle, and other nesting birds. Additionally, trained pre-inspectors will use current data from DFG and CNDDB and professional judgment to determine whether active Swainson's hawk, golden eagle, or bald eagle nests are located near proposed work. If pre-inspectors identify an active nest near a proposed work area, they will prescribe measures to avoid nest abandonment and other adverse effects to these species, including working the line another time of year, maintaining a 500-foot setback, or if the line is in need of emergency pruning, contacting HCP administrator.
- ▶ **AMM-23:** If medium or large disturbance covered activities take place within 0.5 miles of an active breeding colony of tricolored blackbirds or bank swallows or a small disturbance covered activities take place within 350 feet of an active breeding colony of these species, a qualified biologist will evaluate the site prior to work during the breeding season (April 1–July 31). If an active colony of either species could be disrupted by the covered activity, the biologist will stake and flag an exclusion zone of at least 350 feet around the colony prior to O&M activities at the site. This exclusion zone will be established in the field based on site conditions, the covered activity, and professional judgment by a qualified PG&E biologist and will be greater than the minimum distance. Work will not occur in this exclusion zone during April 1–July 31.

3.4.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that will apply to the PG&E components of the project. The project includes the following APMs and CMs related to biological resources.

LSPGC APMs

- ▶ **APM BIO-1: Avoid Environmentally Sensitive Areas.** Biological field surveys will be performed for any portion of the proposed project area not yet surveyed (e.g., areas that did not have landowner access, new or modified staging areas, pull sites, or other work areas). Sensitive biological resources or areas discovered during surveys will be subject to a buffer from construction activities in accordance with the applicable proposed project applicant-proposed measures (APMs). The findings of all biological field surveys on portions of the proposed project area not yet surveyed will be provided to the California Public Utilities Commission (CPUC) prior to construction commencing within those areas.
- ▶ **APM BIO-2: Develop and Implement Restoration Plan.** A proposed project-specific restoration plan will be prepared for areas to be temporarily disturbed by the proposed project. Actively cultivated agricultural fields, developed areas, or habitats disturbed as a result of activities not related to the proposed project will not be subject to the restoration plan. The restoration plan will include procedures for restoration activities, including

plant species to be reseeded, procedures to reduce weed encroachment, and expected timeframes for restoration. Reseeding activities will be conducted in accordance with the proposed project Storm Water Pollution Prevention Plan. The restoration plan will be submitted to the CPUC for approval prior to the start of construction activities.

- ▶ **APM BIO-3: Worker's Environmental Awareness Program.** A Worker's Environmental Awareness Program (WEAP) will be designed, implemented, and provided to all Proposed Project personnel, including construction supervisors and field personnel, prior to personnel commencing work on the proposed project. The WEAP will inform all construction personnel of the resource protection and avoidance measures, as well as procedures to be followed upon the discovery of environmental resources. Additionally, the WEAP will train all construction personnel on hazardous materials management, hazardous wastes and stained or odiferous soils identification, and applicable regulations. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:
 - A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to environmental and biological resource protection;
 - Training on how to identify sensitive or special-status biological resources, environmentally sensitive area (ESA) boundaries, housekeeping (i.e., trash and equipment cleaning), safety, work stoppage, and communication protocol;
 - A discussion of procedures to be followed in the event that unanticipated sensitive or special-status biological resources are discovered during implementation of the Proposed Project;
 - A discussion of disciplinary and other actions that could be taken against persons violating environmental and biological resource protection laws and applicant policies;
 - Training on the handling, storage, and disposal of hazardous materials and wastes in accordance with applicable regulations;
 - Training on the identification of potentially hazardous wastes and stained or odiferous soils; and
 - A statement by the construction company or applicable employer agreeing to abide by the WEAP and other applicable laws and regulations.

The WEAP will be submitted to and approved by the CPUC prior to construction.

- ▶ **APM BIO-4: Pre-Construction Plant Surveys.** Prior to initial vegetation clearing and ground-disturbing activities in annual grassland habitat, a qualified biologist will conduct pre-construction surveys of the proposed project work area for special-status plants. Surveys will be conducted during the appropriate bloom period for Lost Hills crownscale and Panoche pepper-grass (i.e., April to September and February to June, respectively). No surveys will be conducted in actively cultivated agricultural fields, bare ground, or developed areas. In the event of the discovery of a previously unknown special-status plant, the area will be marked as a sensitive area and will be avoided to the maximum extent practicable. If avoidance of species listed under the federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) is not possible, the U.S. Fish and Wildlife Service (USFWS) and/or the California Department of Fish and Wildlife (CDFW) will be consulted. Any other construction activities that may impact sensitive biological resources, including movement of construction equipment and other activities outside of the fenced/paved areas, will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources.
- ▶ **APM BIO-5: Vehicle Cleaning.** Prior to their initial arrival on the proposed project site, all construction equipment and vehicles that will travel or operate within annual grassland habitats and/or outside of approved access roads/designated parking areas (e.g., staging yards) within these habitats will be cleaned to avoid spread of noxious weeds and non-native invasive plant species.

- ▶ **APM BIO-6: Pre-Construction Wildlife and Burrow Surveys.** Prior to initial vegetation clearance and ground-disturbing activities, a qualified biologist will conduct pre-construction surveys of the proposed project work area for special-status wildlife and burrows and dens potentially occupied by special-status wildlife. Surveys will be confined to proposed project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within 500-foot radius of annual grassland habitats. The qualified biologist will identify, flag, and map all burrows and dens potentially occupied by burrowing owl, San Joaquin antelope squirrel, giant kangaroo rat, and San Joaquin kit fox, and then confirm occupation of all potential burrows for buffers and avoidance. Methods of determining burrow occupancy may include, but will not be limited to, visual observations of scat or tracks outside burrow entrances, dusting burrow entrances with a tracking medium for a period of 3 days, installing trail cameras for nocturnal observations, small mammal trapping, or a combination of these methods as appropriate and in consultation with the CDFW and USFWS. If occupied burrows cannot be avoided, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.
- ▶ **APM BIO-7: Pre-Construction Giant Kangaroo Rat Surveys.** Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the proposed project work area for giant kangaroo rat. Surveys will be confined to proposed project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the San Joaquin Kangaroo Rat Trapping Protocol (USFWS 2013). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.
- ▶ **APM BIO-8: Pre-Construction San Joaquin Kit Fox Surveys.** Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the Proposed Project work area for San Joaquin kit fox. Surveys will be confined to proposed project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.
- ▶ **APM BIO-9: Pre-Construction San Joaquin Antelope Squirrel Surveys.** Prior to the initiation of construction, a qualified biologist will conduct focused surveys of the proposed project work area for San Joaquin antelope squirrel in annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. If species presence is determined through these surveys, the CDFW will be consulted to ensure compliance with the CESA, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval in accordance with APM BIO-10.
- ▶ **APM BIO-10: Burrow and Den Avoidance.** If occupied burrows or dens are found during pre-construction wildlife and burrow surveys, adequate buffers will be established around burrows. Adequate buffers will be determined by a qualified biologist based on field conditions and resource agency guidelines. If avoidance of species listed under the FESA or CESA is not possible, the USFWS and/or CDFW will be consulted, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval, as appropriate. These plans may include, but will not be limited to the following:
 - Detailed description of trapping methodology,
 - Detailed burrow excavation methods,
 - Release location(s),
 - Detailed release methods,

- Artificial burrow design and installation methods,
- Description of exclusion fencing type and implementation, and
- Identification of a wildlife rehabilitation center or veterinary facility capable of and willing to treat injured special-status species.

Any other construction activities that may impact burrows occupied by special-status species (including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat) will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to sensitive resources.

- ▶ **APM BIO-11: Vehicle Travel.** Vehicles will adhere to a speed limit of 15 mph on proposed project-specific unpaved construction routes where no posted speed limit exists and within temporary work areas. In addition, construction and maintenance employees will be required to stay on established and clearly marked and existing roads and within the limits of disturbance except when not feasible due to physical or safety constraints and will 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-12: Trapped Animal Prevention.** All excavated holes/trenches that are not filled at the end of a workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife species.
- ▶ **APM BIO-13: Delineation of Work Areas.** All work areas within the proposed project area will be clearly delineated with fencing, staking, or flags prior to construction commencing. Construction activities will be restricted to delineated work areas, and all delineation will be maintained in working order until completion of construction.
- ▶ **APM BIO-14: Project Lighting.** The use of outdoor lighting during construction and O&M will be minimized whenever practicable. Photocell-controlled lighting (i.e., motion detection) will be provided at a level sufficient to provide safe entry and exit to the proposed Manning Substation and control enclosures. All lighting will be selectively placed, shielded, and directed downward and away from sensitive habitat and resources to the maximum extent practicable.
- ▶ **APM BIO-15: Pre-Construction Blunt-Nosed Leopard Lizard Surveys.** Prior to the initiation of construction, a qualified biologist will conduct protocol-level surveys of the proposed project work area for blunt-nosed leopard lizard in annual grassland habitats and disturbed habitats within a 500-foot radius of annual grassland habitats. Surveys will conform to the methodology outlined in the Approved Survey Methodology for the Blunt-Nosed Leopard Lizard (CDFW 2019). If species presence is determined through these surveys, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and a species-specific avoidance plan will be developed for agency review and approval. This plan will include an overview and results of blunt-nosed leopard lizard surveys, the proposed mitigation measure implementation strategy, and methods to avoid species take prior to and during construction activities.
- ▶ **APM BIO-16: Pre-Construction Crotch's Bumblebee Surveys.** A pre-construction survey plan for Crotch's bumblebee will be developed and implemented for all proposed project work areas within annual grassland habitats, as well as disturbed habitats and agricultural areas within a 500-foot radius of annual grassland habitats. The plan will detail survey methodology and reporting procedures. Prior to initial vegetation clearance and ground-disturbing activities, pre-construction surveys will be conducted to identify Crotch's bumblebee habitat and host plants present within the proposed project work areas. Photograph-only surveys will also be conducted in accordance with USFWS protocol recommendations (USFWS 2019) to determine adult bumblebee presence. Active Crotch's bumblebee nest sites may be incidentally observed during photograph-only surveys and will be identified as active based on repeated observations of bumblebee ingress and egress from the nest site and after consultation with the CDFW. Active nests will be marked for avoidance prior to construction.

- ▶ **APM BIO-17: Crotch's Bumblebee Nest and Host Plant Avoidance.** If occupied Crotch's bumblebee nests are found during pre-construction bumblebee surveys, adequate buffers will be established around nests. Adequate buffers will be determined by a qualified biologist based on field conditions and resource agency guidelines. If avoidance of bumblebee nests is not possible, the CDFW will be consulted. If Crotch's bumblebee host plants are found during pre-construction bumblebee surveys, these will be avoided to the greatest extent feasible during construction activities. Any construction activities that may impact Crotch's bumblebee nests and/or host plants, including movement of construction equipment and activities outside of the fenced/paved areas within wildlife habitat, will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of occupied nests and host plants and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts to Crotch's bumblebee.
- ▶ **APM BIO-18: Nesting Bird Avoidance.** If feasible, construction and vegetation trimming/removal will be avoided during the migratory bird nesting or breeding season (i.e., February 15 to August 31). When it is not feasible to avoid construction during the nesting or breeding season, a survey will be performed in the area where the work is to occur. This survey will 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 (which will differ based on species and location of nest) will 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 federally or state-listed species, the USFWS and CDFW will be consulted as necessary. Monitoring of the nest will continue until the birds fledge or construction is no longer occurring on the site.
- ▶ **APM BIO-19: Vegetation.** Vegetation and tree removal will be limited to the minimum area necessary to allow construction to proceed.
- ▶ **APM BIO-20: Raptor Nests.** If a raptor nest is observed during pre-construction surveys, a qualified biologist will determine if it is active. If the nest is determined to be active, the biological monitor will 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 proposed project are disturbing or disrupting nesting or breeding activities, the biological monitor will make recommendations to reduce noise or disturbance in the vicinity of the nest, such as temporarily suspending work in the area. If the nest is determined to be inactive, the nest will be removed under direct supervision of the qualified biologist.
- ▶ **APM AIR-2: Dust Control.** Measures to control fugitive dust emissions will be implemented during construction. These measures will be included in a Fugitive Dust Control Plan that will be prepared in accordance with San Joaquin Valley Air Pollution Control District requirements. The measures will be implemented as needed to control dust emissions. These measures will include, but may not be limited to, the following:
 - Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance.
 - Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or will be covered.
 - Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material will be covered with tarps or maintain at least 6 inches of freeboard.
 - Vehicles will adhere to a speed limit of 15 miles per hour (mph) on proposed project-specific construction routes and within temporary work areas.

PG&E CMs

- ▶ **CM BIO-1: Worker Environmental Awareness Training.** A qualified biologist will develop an environmental awareness training program that is specific to the proposed project. All on-site construction personnel will attend the training before they begin work on the proposed project. Training will include a discussion of the

construction management practices that are being implemented to protect biological resources as well as the terms and conditions of any Proposed Project permits.

- ▶ **CM BIO-2: Special-Status Plants.** Prior to initial vegetation clearing and ground-disturbing activities in annual grassland habitat, a qualified biologist will conduct pre-construction surveys of the proposed project work area for special-status plants. If a covered plant species is present following special-status plant surveys, a qualified biologist will stake and flag exclusion zones of 100 feet around plant occupied habitat (both the standing individuals and the seed bank individuals) of the covered species prior to performing the activities. If an exclusion zone cannot extend the specified distance from the habitat, the biologist will stake and flag a restricted activity zone of the maximum practicable distance from the exclusion zone around the habitat. This exclusion zone distance is a guideline that may be modified by a qualified biologist, based on site-specific conditions (including habituation by the species to background disturbance levels). If avoidance of plant species listed under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) is not possible, the USFWS and/or CDFW will be consulted.
- ▶ **CM BIO-3: Giant Kangaroo Rat and San Joaquin Antelope Squirrel.** Prior to the initiation of ground-disturbing activities in suitable grassland habitat, a qualified biologist will conduct pre-construction surveys of the proposed project work area for giant kangaroo rat and San Joaquin antelope squirrel. Personnel shall avoid occupied or potentially occupied burrows identified by a qualified biologist. If occupied or potentially occupied burrows in the core areas can be avoided by a minimum of 50 feet, then work can proceed. If occupied or potentially occupied burrows cannot be avoided by 50 feet, then a qualified biologist shall stake and flag an appropriate work-exclusion zone and remain on site as a biological monitor. If occupied burrows cannot be avoided, the USFWS and CDFW will be consulted to ensure compliance with the FESA and CESA, respectively, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval.
- ▶ **CM BIO-4: San Joaquin Kit Fox.** Prior to the initiation of ground-disturbing activities in grassland habitat suitable for foraging and denning, a qualified biologist will conduct pre-construction surveys of the proposed project work area for San Joaquin kit fox. If San Joaquin kit fox dens are present, their disturbance and destruction will be avoided. Exclusion zones for kit fox will be implemented following USFWS procedures (USFWS 1999) or the latest USFWS procedures. The radius of these zones will follow current standards or will be determined on a case-by-case basis in coordination with the USFWS and CDFW. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. 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 for kit fox (USFWS 1999). If occupied, work activities will be delayed until the den is determined to no longer be active.
- ▶ **CM BIO-5: Blunt-Nosed Leopard Lizard.** Prior to the initiation of activities within suitable arid, open habitat for blunt-nosed leopard lizard, a qualified biologist will conduct a pre-construction survey and will identify if burrows are present and if work can avoid burrows. If work can avoid suitable burrows, a qualified biologist will stake and flag an appropriate exclusion zone around the burrows prior to activities at the job site and monitor throughout the duration of ground-disturbing activities. If a blunt-nosed leopard lizard is observed and in danger of injury or mortality, all work must stop until the individual has voluntarily moved out of the work area.

If burrows cannot be avoided, a qualified biologist will survey the workspace prior to ground- or vegetation-disturbing activities to determine presence/absence. Surveys will be conducted between April 15 and June 30 or August 1 and September 1 or when ambient temperatures are 77 to 95 degrees Fahrenheit and soil temperatures 86 to 122 degrees Fahrenheit. Six separate surveys of the site will occur between 9:00 a.m. and 2:00 p.m. If the species is not detected at the work site, then no further action is required. If blunt-nosed leopard lizard is present, then conduct work activity during the active period, clearly flag all access routes and staging areas, and monitor through the duration of work activities within occupied habitat.
- ▶ **CM BIO-6: Western Spadefoot.** Avoid work in western spadefoot aquatic habitat (i.e., temporary rain pools, quiet streams, and stock tanks). Activities that require ground disturbance within 250 feet of occupied or suitable

western spadefoot aquatic habitat will occur only after the ground surface is completely dry (typically June 1 to October 31 but will vary year to year). If this is not feasible, a biologist will conduct a pre-construction survey prior to work within 250 feet of occupied or suitable aquatic habitat and disturbance will be minimized as much as possible. Utility personnel will minimize disturbing burrows within 250 feet of suitable western spadefoot aquatic habitat. Utility personnel will utilize existing roadways within 250 feet of occupied or suitable western spadefoot aquatic habitat whenever possible. If an existing roadway cannot be used, only rubber-tired vehicles will be utilized in this area.

- ▶ **CM BIO-7: Western Burrowing Owl.** Prior to the initiation of activities occurring in suitable grassland habitat, a qualified biologist will conduct pre construction surveys for active burrows no more than 30 days prior and no less than 14 days prior to the start of construction in accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If western burrowing owls are present at the site, a qualified biologist will establish an exclusion zone in accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If a biologist experienced with burrowing owl determines the relocation of owls is necessary, a passive relocation effort may be conducted as described below, in coordination with the CDFW as appropriate. During the nonbreeding season (generally September 1 to January 31), a qualified biologist may passively relocate burrowing owls found within construction areas. Prior to passively relocating burrowing owls, a Burrowing Owl Exclusion Plan shall be prepared by a qualified biologist in accordance with Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The Burrowing Owl Exclusion Plan shall be submitted to the CDFW for review as required. The biologist shall accomplish such relocations using one-way burrow doors installed and left in place for at least two nights; owls exiting their burrows will not be able to re-enter. Then, immediately before the start of construction activities, the biologists shall remove all doors and excavate the burrows to ensure that no animals are present in the burrow. The excavated burrows shall then be backfilled. To prevent evicted owls from occupying other burrows in the impact area, the biologist shall, before eviction occurs:
 - (1) install one-way doors and backfill all potentially suitable burrows within the impact area; and
 - (2) install one-way doors in all suitable burrows located within approximately 50 feet of the active burrow, then remove them once the displaced owls have settled elsewhere. When temporary or permanent burrow-exclusion methods are implemented, the following steps shall be taken: Prior to excavation, a qualified biologist shall verify that evicted owls have access to multiple, unoccupied, alternative burrows, located nearby (within 250 feet) and outside of the projected disturbance zone. If no suitable alternative natural burrows are available for the owls, then, for each owl that is evicted, at least two artificial burrows shall be installed in suitable nearby habitat areas. Installation of any required artificial burrows preferably shall occur at least 2 to 3 weeks before the relevant evictions occur, to give the owls time to become familiar with the new burrow locations before being evicted. The artificial burrow design and installation shall be described in the Burrowing Owl Exclusion Plan per Appendix E of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Passive relocation of burrowing owls shall be limited in areas adjacent to proposed project activities that have a sustained or low-level disturbance regime; this approach shall allow burrowing owls that are tolerant of proposed project activities to occupy quality, suitable nesting and refuge burrows. The use of passive relocation techniques in a given area shall be determined by a qualified biologist who may consult with the CDFW, and shall depend on existing and future conditions (e.g., time of year, vegetation/topographic screening, and disturbance regimes).
- ▶ **CM BIO-8: Migratory Birds.** Prior to work activities conducted during the nesting bird season (February 1 to August 31), the work area will be inspected for nests. If a nest is discovered, a biologist will be contacted to determine the nest status, the species of the nesting birds, and if work activities are likely to impact the nest. If a nest is confirmed active (i.e., the nest contains eggs or young or the adults are exhibiting nesting behaviors such as siting in the nest, carrying food to the nest, etc.), designated avoidance buffers will be required and implemented according to the most recent PG&E Nesting Bird Management Plan and guidance available. The established buffers will remain in effect until the young have fledged or the nest is no longer active, as confirmed by the biologist. The biologist will have authority to order the cessation of nearby work activities or adjust buffers if nesting pairs exhibit signs of disturbance. Buffer sizes may be reduced if the biologist determines that a

reduced buffer size will not result in the abandonment of the nest or failure based on compelling biological and ecological reasoning (e.g., the biology of the bird species, concealment of the nest by topography, land use type, vegetation, and the level of project activity). Inactive nests may be removed in accordance with PG&E's approved avian permits.

- ▶ **CM AIR-2: Fugitive Dust Control.** The following actions will be taken, as applicable and feasible, to control fugitive dust during construction. San Joaquin Valley Air Pollution Control District notifications will be made in accordance with any requirements in effect at the time of construction.
 - Applying water to disturbed areas and to storage stockpiles.
 - Applying water in sufficient quantities to prevent dust plumes during activities such as clearing and grubbing, backfilling, trenching, and other earth-moving activities.
 - Limit vehicle speed to 15 mph.
 - Load haul trucks with a freeboard (space between top of truck and load) of 6 inches or greater.
 - Cover the top of the haul truck load.
 - Clean up track-out at least daily.
- ▶ **CM GEN-1: Standard Construction Practices.** The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts.
 - Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
 - Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety.
 - Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable.
 - Speed limit: vehicles will not exceed a speed limit of 15 mph in the ROWs or on unpaved roads within sensitive land-cover types.
 - Restoration and erosion control: on completion of any Proposed Project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions.
 - Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or U.S. Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures.
 - Staging Area Maintenance: Work sites would be maintained in a clean and orderly State.
 - Environmentally Sensitive Areas: Biological field surveys would be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities.
 - Aquatic resources: All aquatic resources would be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas.
 - Vegetation: Vegetation and tree removal would be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements.
 - Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife.

- Delineation of Work Areas: Work areas would be clearly delineated prior to construction commencing with fencing, staking, or flags.

3.4.4 Discussion

- 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 the U.S. Fish and Wildlife Service?

Special-Status Plant Species

Ten special-status plants have potential to occur in the project alignment area (Table 3.4-1). These plant species are associated with grassland habitat and could occur in areas that contain *Amsinckia-Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance habitats in the project alignment area, as well as some agricultural habitats that contain species from the alliances described above, and in unsurveyed areas that may contain grassland. These habitats occur in areas where both LSPGC and PG&E project components would be constructed, installed, and maintained.

LSPGC and PG&E Project Components

Construction

Ground disturbance associated with construction or installation of the Manning Substation, access roads, staging areas, TSPs, concrete foundations, and underground fiber cable, as well as vegetation removal and road widening could result in direct impacts on special-status plant species if present in the survey area. Individual plants may be directly removed or damaged, including being broken, crushed, or buried from vehicle and equipment operation, vegetation trimming and removal, soil excavation and compaction, and grading. Damaged plants may experience altered growth and development, or reduced or eliminated seed-set and reproduction, and mortality of individuals could eventually occur. Indirect impacts on special-status plants in the survey area could occur from the introduction and spread of invasive weeds that outcompete other plants for resources; the production of fugitive dust, which can alter plant photosynthesis; soil erosion; and accidental release of toxic substances. Land cover surrounding the Tranquillity Switching Station is composed of disturbed land, and special-status plant species are not expected to occur or be adversely affected in that area.

Operation and Maintenance

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment area) with hand tools. These activities could result in accidental removal or trampling of special-status plants if present in the survey area.

Implementation of APMs and CMs

LSPGC APMs BIO-1 through BIO-3 and BIO-5 would apply to the LSPGC project components and would reduce impacts on special-status plants by requiring reconnaissance surveys in areas not previously surveyed due to access restrictions (APM BIO-1); restoration of the project alignment area after construction, including reseeded and avoidance of invasive plant introduction (APM BIO-2); WEAP training for project personnel (APM BIO-3); vehicle cleaning to avoid spread of nonnative plants and noxious weeds (APM BIO-5); and control of fugitive dust (APM AIR-2). LSPGC APM BIO-4 would apply to the project and would specifically reduce impacts on special-status plants by requiring pre-construction surveys for Lost Hills crownscale and Panoche pepper-grass.

PG&E CM BIO-1 would apply to the PG&E project components and would reduce impacts on special-status plants by requiring WEAP training for project personnel. PG&E CM AIR-2 would require control of fugitive dust and CM BIO-2 would reduce impacts on special-status plants by requiring pre-construction surveys and avoidance. CM GEN-1 would require surveys to be conducted in areas that were not previously surveyed due to access restrictions.

Significance Before Mitigation

While implementation of LSPGC APMs and PG&E CMs would reduce impacts on special-status plants by requiring pre-construction surveys for these plants, the APMs and CMs do not specify the protocol that would be followed for the surveys, and while the APMs and CMs describe avoidance measures, they do not provide specific measures that would be implemented if avoidance of special-status plants is not possible. Additionally, the APMs and CMs do not require surveys for all of the special-status plant species that have potential to occur in the project alignment area. The loss of special-status plants could substantially affect the abundance, distribution, and viability of local and regional populations of these species. Therefore, this impact on special-status plants would be significant without mitigation.

Construction Measures and Mitigation Measures

Construction Measure BIO-A [PG&E] / Mitigation Measure BIO-1 [LSPGC]: Conduct Protocol-Level Surveys for Special-Status Plants and Compensate for Impacts

Special-status plant surveys described in APM BIO-4 and CM BIO-2 shall follow the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). The surveys will be conducted within suitable habitat during the typical blooming period for the 10 species determined to have potential to occur in the project alignment area as described in Table 3.4-1.

If plant species protected under ESA (i.e., San Joaquin woollythreads) are found during surveys for special-status plants conducted pursuant to APM BIO-4 and CM BIO-2, following the CDFW protocol described above, a protective buffer of at least 20 feet will be established around individual plants, and the plants will be avoided.

If plant species considered special-status under CEQA (i.e., plants with a CRPR of 1 or 2) are found during surveys for special-status plants conducted pursuant to APM BIO-4 and CM BIO-2, following the CDFW protocol described above, a protective buffer of at least 20 feet will be established around individual plants, and the plants will be avoided, if feasible.

Where avoidance of plants considered special-status under CEQA is not feasible, and the only plants present in a work area are annual plants (see Table 3.4-1), initial disturbances associated with temporary construction work activities will be scheduled to occur after seed set and prior to seedling emergence and when soil is dry. If special-status perennial plants (i.e., recurved larkspur) are present in a work area, this method would not avoid impacts, and these plants would be avoided as described above.

When permanent ground disturbing activities cannot be avoided in known annual special-status plant locations the top 4 inches of soil will be collected and retained onsite prior to disturbance and replaced in the same approximate location following completion of project activities. If the surface topography is altered by the work, the surface will be re-contoured to existing conditions and the salvaged topsoil will be replaced.

Significance After Mitigation: Special-Status Plants

Implementation of Construction Measure BIO-A/Mitigation Measure BIO-1 would require that surveys conducted under APM BIO-4 and CM BIO-2 follow an established protocol, that the surveys consider the full list of special-status plants that may occur in the project alignment areas (i.e., Table 3.4-1), and that additional measures to compensate for loss of special-status plants be implemented if avoidance is not possible. Compensation requires the occupied area of compensatory plant populations to be equal to or greater than the affected occupied habitat, and also requires monitoring to confirm that the compensatory and preserved plant populations would be self-producing and that the compensatory measures were successful. Therefore, with implementation of mitigation, this impact on special-status plants would be **less than significant**.

Special-Status Wildlife Species

As shown in Table 3.4-2, 19 special-status wildlife species were determined to have potential to occur in the survey area based on the presence of habitat suitable for the species, either mapped during surveys (Insignia Environmental 2024) or based on review aerial imagery in unsurveyed areas.

Special-Status Reptiles

Four special-status reptiles—blunt-nosed leopard lizard, California glossy snake, coast horned lizard, and San Joaquin coachwhip—may occur in the portions of the survey area that contain *Amsinckia–Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance and in unsurveyed portions of the survey area that may contain grassland or shrubs (where both LSPGC and PG&E project components would be constructed, installed, and maintained).

Western Spadefoot

Western spadefoot may use upland habitat in the portions of the survey area that contain *Amsinckia–Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance and in unsurveyed portions of the survey area that may contain grassland (where both LSPGC and PG&E project components would be constructed, installed, and maintained).

Special-Status Birds

Eight special-status bird species may occur in the survey area: burrowing owl, golden eagle, loggerhead shrike, mountain plover, northern harrier, short-eared owl, Swainson's hawk, and tricolored blackbird. Northern harrier and short-eared owl may occur in the portions of the survey area that contain *Amsinckia–Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance. Burrowing owl, mountain plover, Swainson's hawk, and tricolored blackbird may occur in these areas as well; however, these species are also associated with agricultural areas. Based on a review of aerial imagery in unsurveyed portions of the project alignment area, shrub habitat may be present, which may provide nesting habitat for loggerhead shrikes. Mountain plovers are not expected to nest in the survey area, but may overwinter (e.g., rest, forage) in the survey area. Golden eagles and tricolored blackbirds are also not expected to nest in the survey area due to lack of nesting habitat; however, these species may forage in the survey area and may nest adjacent to the survey area. All of these species may occur in or adjacent to areas where LSPGC and PG&E project components would be constructed, installed, and maintained. In addition, native birds protected under California Fish and Game Code and the federal MBTA may also occur in the survey area and may nest in multiple different habitat types, including grasslands, orchards, developed areas (e.g., on buildings), and transmission towers.

Crotch's Bumble Bee

Crotch's bumble bee nesting habitat (e.g., rodent burrows) and foraging habitat may occur in the portions of the survey area that contain *Amsinckia–Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance, unsurveyed portions of the survey area that may contain grassland or shrubs, as well as edges of agricultural areas that contain hedgerows, flowering plants, or rodent burrows. This species may occur in areas where both LSPGC and PG&E project components would be constructed, installed, and maintained.

Monarch Butterfly

The survey area is outside of the monarch butterfly overwintering range; however, it is within the breeding and foraging range of the species. Monarchs require milkweed (*Asclepias* spp.) as a structure for egg laying and a food source for caterpillars (i.e., breeding) and floral resources for foraging adults. Foraging and breeding habitat for monarchs may occur in the portions of the survey area that contain *Amsinckia–Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance, unsurveyed portions of the survey area that may contain grassland or shrubs, as well as edges of agricultural areas that contain hedgerows and flowering plants, and roadsides. This species may occur in areas where both LSPGC and PG&E project components would be constructed, installed, and maintained.

Special-Status Mammals

Five special-status mammals—American badger, giant kangaroo rat, San Joaquin antelope squirrel, San Joaquin kit fox, and Tulare grasshopper mouse—may occur in the portions of the survey area that contain *Amsinckia–Phacelia* alliance and *Avena* spp. and *Bromus* spp. seminatural alliance and in unsurveyed portions of the survey area that may contain grassland or shrubs (where both LSPGC and PG&E project components would be constructed, installed, and maintained). San Joaquin kit fox is also known to occur in agricultural and developed areas, and Tulare grasshopper mouse may occur in areas that contain shrub habitat as determined from review of aerial imagery of the project alignment area. All five of these species establish ground burrows.

LSPGC and PG&E Project Components

Construction

Ground disturbance associated with construction or installation of the Manning Substation, access roads, staging areas, TSPs, concrete foundations, and underground fiber cable, as well as vegetation removal and road widening, could result in direct impacts on special-status wildlife species if present in the survey area. Special-status reptiles and western spadefoot toads could be inadvertently crushed and killed by equipment or vehicles on roads or in construction areas during ground disturbance. Underground burrows or nests occupied by special-status snakes, lizards, western spadefoot toads, burrowing owls, Crotch's bumble bees, or mammals (i.e., American badger, giant kangaroo rat, San Joaquin antelope squirrel, San Joaquin kit fox, Tulare grasshopper mouse) could be crushed and destroyed by heavy equipment or vehicles, which could result in injury or mortality of adults or loss of eggs or young. Removal or trimming of vegetation and trees could result in removal of bird nests, and potential loss of eggs or young. Vegetation removal and ground disturbance may also result in inadvertent removal of milkweed plants, which could result in loss of monarch eggs or caterpillars, and removal of flowering plants that may provide foraging habitat for monarchs or Crotch's bumble bees. Furthermore, construction activities would include the operation of heavy equipment and vehicles, which could generate noise or visual stimuli that could result in disturbance of nearby nesting birds, which may result in nest abandonment and potential loss of eggs or chicks. Additionally, special-status species, including reptiles and mammals, may become entrapped in holes or trenches during construction or could be struck by construction vehicles operating in the project alignment area.

Operation and Maintenance

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment) with hand tools. Although infrequent these activities could result in similar impacts on special-status wildlife as those described above for construction activities. Operation of the Manning Substation may introduce a new source of artificial nighttime lighting that could result in disturbance to nocturnal or crepuscular special-status birds and mammals and disruption of foraging activities.

PG&E has taken authorization for Swainson's hawk pursuant to the SJVHCP for O&M activities, and would implement AMMs 1-11, AMM-19, AMM-22, and AMM-23 as required under the SJVHCP to address potential impacts on Swainson's hawk, burrowing owl, tricolored blackbird, and other nesting birds.

Implementation of APMs and CMs

LSPGC APMs BIO-1 through BIO-3 and BIO-5 would apply to the LSPGC project components and would reduce impacts on special-status wildlife by requiring reconnaissance surveys in areas not previously surveyed due to access restrictions (APM BIO-1); restoration of the project alignment area after construction, including reseeding and avoidance of invasive plant introduction (APM BIO-2); WEAP training for project personnel (APM BIO-3); and vehicle cleaning to avoid spread of nonnative plants and noxious weeds (APM BIO-5).

LSPGC APMs BIO-6 through BIO-20 would apply to the LSPGC project components and would specifically reduce impacts on special-status wildlife species. APMs would require pre-construction surveys for burrowing wildlife (burrowing owl, San Joaquin antelope squirrel, giant kangaroo rat, and San Joaquin kit fox; APM BIO-6), giant kangaroo rat (APM BIO-7), San Joaquin kit fox (APM BIO-8), San Joaquin antelope squirrel (APM BIO-9), blunt-nosed leopard lizard (APM BIO-15), Crotch's bumble bee (APM BIO-16), and nesting birds (BIO-18). APMs would also require avoidance of impacts on special-status wildlife, if determined to be present in the survey area. Specifically, APMs would require avoidance of occupied dens (APM BIO-10), Crotch's bumble bee nests and host plants (APM BIO-17), active bird nests (APM BIO-18), and monitoring of active raptor nests (APM BIO-20). Additional APMs would further reduce impacts on special-status wildlife by requiring vehicle speed limits (APM BIO-11), trapped animal prevention (APM BIO-12), delineation of work areas (APM BIO-13), and project lighting standards (APM BIO-14).

PG&E CM BIO-1 would apply to the PG&E project components and would reduce impacts on special-status wildlife by requiring WEAP training for project personnel. CM GEN-1 would require unsurveyed areas to be surveyed prior to construction of PG&E project components and consideration of any sensitive biological resources or areas discovered

during surveys. CMs would reduce impacts on special-status wildlife by requiring pre-construction surveys and avoidance of giant kangaroo rat (CM BIO-3), San Joaquin antelope squirrel (CM BIO-3), San Joaquin kit fox (CM BIO-4), blunt-nosed leopard lizard (CM BIO-5), western spadefoot (CM BIO-6), burrowing owl (CM BIO-7), and nesting birds (CM BIO-8).

Significance Before Mitigation

Implementation of LSPGC APMs and PG&E CMs would reduce impacts on some special-status wildlife species that may occur in the survey area by requiring pre-construction surveys for these species, implementation of avoidance measures, and preparation of species-specific mortality reduction or avoidance plans in consultation with the CDFW and USFWS. However, APMs and CMs do not require pre-construction surveys for California glossy snake, coast horned lizard, San Joaquin coachwhip, or Tulare grasshopper mouse, all of which have potential to occur in the project alignment area. While CM BIO-6 would require pre-construction surveys for western spadefoot for PG&E components, APMs do not require surveys for this species for LSPGC project components. APM BIO-15 and CM BIO-5 require surveys for blunt-nosed leopard lizard, but APM BIO-15 does not include details regarding how the species would be fully avoided, and CM BIO-5 does not specify the survey protocol that would be used. APMs BIO-16 and BIO-17 would require pre-construction surveys and avoidance measures for Crotch's bumble bees for LSPGC components; however, CMs do not require surveys or avoidance of this species for PG&E project components.

APMs BIO-18 and BIO-20 (for LSPGC project components) and CM BIO-6 (for PG&E project components) would require pre-construction surveys for nesting birds and implementation of avoidance measures; however, the surveys would only be implemented in the area where the work is to occur, which may not be sufficient to detect nests adjacent to work areas that could be disturbed by construction and maintenance activities. Furthermore, these APMs and CMs do not identify the protocols that would be followed for nesting bird species, as applicable.

Floral resources in the survey area may provide foraging habitat for monarch butterflies. Vegetation removal, equipment laydown in staging areas, and vehicle and equipment operation could crush or bury floral resources during construction and maintenance, temporarily removing potential foraging habitat. Habitat conversion to urban use from the construction of the Manning Substation could permanently remove floral resources that could be used by monarch for foraging. However, the survey area is dominated by agricultural land cover types and grasslands that contain mostly nonnative grasses and represents low quality foraging habitat for monarchs. In addition, most vegetation removal would be temporary and there is better quality grassland habitat in the vicinity of the survey that may provide higher quality foraging habitat for monarch. Therefore, project implementation would not result in a significant loss of overall foraging habitat for monarch and adverse effects would not be substantial.

Construction of LSPGC and PG&E project components may result in a substantial adverse effect on special-status reptiles (including blunt-nosed leopard lizard), western spadefoot, special-status birds, Crotch's bumble bee, and Tulare grasshopper mouse either directly (i.e., mortality of individuals) or through habitat modifications (i.e., loss of habitat) if they are present in the project alignment area. Impacts on these species would be significant without mitigation.

Construction Measures and Mitigation Measures

Construction Measure BIO-B [PG&E]/Mitigation Measure BIO-2 [LSPGC]: Conduct Protocol-Level Surveys for Blunt-Nosed Leopard Lizard and Implement Avoidance Measures

The following measure shall supersede and replace LSPGC APM BIO-15 for LSPGC project components and PG&E CM BIO-5 for PG&E project components, as presented in the PEA, for blunt-nosed leopard lizard:

- ▶ Prior to construction of project components in habitats suitable for blunt-nosed leopard lizard (i.e., annual grassland), at least two qualified biologists approved by the CPUC shall conduct surveys following measures in the *Approved Survey Methodology for the Blunt-Nosed Leopard Lizard* (CDFW 2019) between April and September, including spring adult surveys and fall hatchling surveys. Biologists shall conduct visual search surveys while walking in parallel on adjacent transects that cover all areas within the project site with potential blunt-nosed leopard lizard habitat. Biologists shall stop periodically to scan the transect for blunt-nosed leopard lizard

using close-focusing binoculars. The survey methods applied shall be commensurate with the anticipated level of disturbance, as described below.

- ▶ For project activities that could result in habitat removal:
 - A total of 12 adult surveys shall take place during the optimal survey period (April 15 to July 15) with a maximum of 4 survey days per week and 8 days within any 30-day time period. At least one survey session shall be conducted for 4 consecutive days, weather permitting.
 - A total of 5 additional hatchling surveys shall take place during the hatchling optimal survey period (August 1 to September 15).
- ▶ For operation and maintenance activities that would not result in habitat removal:
 - A total of 8 adult surveys shall take place during the optimal survey period (April 15 to July 15) with a maximum of 3 survey days per week and 6 days within any 30-day time period.
 - Fall hatchling surveys are not required for activities in this category.
- ▶ If blunt-nosed leopard lizards are observed, biologists shall record the location (UTM coordinates) of individuals and the presence of habitat features important for blunt-nosed leopard lizard (e.g., washes, playas, relative abundance of small mammal burrows). Because this species is designated as Fully Protected under the California Fish and Game Code, complete avoidance of take (i.e., hunting, pursuing, catching, capturing, or killing) is required, unless PG&E and/or LSPGC consult with CDFW and obtain an Incidental Take Permit pursuant to SB 147 (Statutes of 2023) and Fish and Game Code Section 2081.15. PG&E and/or LSPGC will adhere to the provisions and conditions of the Incidental Take Permit that may include compensatory mitigation and would fully mitigate impacts on the species. In the event Fish and Game Code Section 2081.15 is deemed by CDFW to be inapplicable such that incidental take is not permissible, PG&E and/or LSPGC shall initiate consultation with CDFW to determine how the project can be designed to completely avoid take of blunt-nosed leopard lizards and potentially occupied habitat.
- ▶ All blunt-nosed leopard lizard observations shall be reported to the CNDDDB within 30 days.
- ▶ If no blunt-nosed leopard lizards are observed during the survey period, then further mitigation for this species is not required. Surveys shall be accepted for one year from the date of completion.

Construction Measure BIO-C [PG&E] / Mitigation Measure BIO-3 [LSPGC]: Conduct Focused Surveys for Special-Status Reptiles and Implement Avoidance Measures

- ▶ Within 14 days before the initiation of any construction activity, a qualified biologist approved by the CPUC shall conduct a focused visual survey of habitat suitable (i.e., annual grassland, scrub) for California glossy snake, coast horned lizard, and/or San Joaquin coachwhip in the project alignment area and a 100-foot buffer surrounding the project alignment area, which shall include walking linear transects.
- ▶ If California glossy snake, coast horned lizard, or San Joaquin coachwhip are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation shall not be required.
- ▶ If California glossy snake, coast horned lizard, or San Joaquin coachwhip are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground-disturbance activities and shall inspect the project site before initiation of project activities. If California glossy snake, coast horned lizard, or San Joaquin coachwhip are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities or will allow the individual to move out of the project area of its own volition if it is not in immediate danger.

Construction Measure BIO-D [PG&E] / Mitigation Measure BIO-4 [LSPGC]: Conduct Focused Surveys for Western Spadefoot Toads and Implement Avoidance Measures

The following measure shall apply for LSPGC project components and shall supersede and replace PG&E CM BIO-6 for PG&E project components, as presented in the PEA, for western spadefoot toads:

- ▶ Within 48 hours prior to project implementation within areas containing habitat suitable for western spadefoot toad, a qualified biologist approved by the CPUC shall conduct focused surveys within identified work and access areas that are located in aquatic (i.e., vernal pool, wetland) and upland (i.e., annual grassland) habitats within approximately 860 feet (262 meters) of aquatic habitat (Baumberger et al. 2019) suitable for the species. Burrows that are unavoidable and considered potentially occupied by western spadefoot toads shall be identified and further examined by a qualified biologist (e.g., with a burrow scope, through hand excavation) to determine whether an adult toad is present in the burrow.
- ▶ If western spadefoot toads are not found, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation will not be required.
- ▶ If western spadefoot toads are detected during focused surveys, then adults, tadpoles, and egg masses shall be relocated by a qualified biologist with a valid CDFW scientific collecting permit to nearby suitable habitat that will not be disturbed by project activities. This relocation is considered adequate to reduce impacts below the level of significance under CEQA. Because western spadefoot is proposed for listing under the ESA, if the species is listed before construction activities begin, LSPGC and PG&E shall consult with the USFWS to determine whether additional measures or permitting is required to comply with the ESA.

Construction Measure BIO-E [PG&E] / Mitigation Measure BIO-5 [LSPGC]: Implement Survey Area Minimums, Survey Timing Standards, and Applicable Protocols for Special-Status and Other Native Birds

The following measure shall supplement the requirements in APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components), as presented in the PEA, for special-status and other native birds:

- ▶ Pre-construction nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components) shall be conducted within work areas and accessible areas in the following buffers surrounding the work area:
 - 0.25 miles for Swainson's hawk;
 - 500 feet for northern harrier, short-eared owl, and other native raptors; and
 - 250 feet for other native bird species.
- ▶ Nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and CM BIO-8 (for PG&E components) shall be conducted no more than 10 days prior to the start of construction activities during the nesting bird season (February 1 to September 15). Continuous construction within an area following a nesting bird survey will negate the need to repeat additional nesting bird surveys. If there is a five day or more lapse in project construction within an area, the nesting bird survey shall be repeated.
- ▶ Focused surveys for Swainson's hawk shall follow the protocols found in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000).
- ▶ If an active nest is discovered during nesting bird surveys conducted pursuant to APMs BIO-18 and BIO-20 (for LSPGC components) and construction activities would occur during the nesting bird season, no-disturbance buffers shall be established. No-disturbance buffers shall be at least 0.25 miles for Swainson's hawk, 500 feet for northern harrier, short-eared owl, or other native raptors, 100 feet for non-raptor special-status birds, and 20 feet for other native birds (i.e., without special status). Any reduction in the no-disturbance buffer for special-status bird species shall require consultation with the CPUC-approved biologist, and would require additional measures, including biological monitoring to determine whether nesting birds are exhibiting disturbance behaviors, after which the no-disturbance buffer size shall be increased.

- ▶ No-disturbance buffers described in CM BIO-8 (for PG&E components) that would follow the most recent PG&E Nesting Bird Management Plan would be sufficient to maintain impacts on nesting birds at less than significant under CEQA.

Construction Measure BIO-F [PG&E] / Mitigation Measure BIO-6 [LSPGC]: Conduct Protocol-Level Surveys for Burrowing Owl and Implement Avoidance Measures

The following measure shall supersede and replace APMs BIO-6 and APM BIO-10 (for LSPGC components) and CM BIO-7 (for PG&E components), as presented in the PEA, for burrowing owl::

- ▶ A qualified biologist approved by the CPUC shall conduct surveys for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet of the work area. Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. A minimum of four surveys shall be conducted to determine whether burrowing owls occupy the site. Surveys shall be conducted according to Appendix D of the 2012 *Staff Report on Burrowing Owl Mitigation* prepared by the California Department of Fish and Game (now CDFW) (CDFW 2012) or any subsequent updated guidance. If feasible, at least one survey should be conducted between February 15 and April 15, and the remaining surveys should be conducted between April 15 and July 15, at least three weeks apart. Because burrowing owls may recolonize a site after only a few days, one of the surveys, or an additional survey, shall be conducted no less than 14 days before initiating ground disturbance activities to verify that take of burrowing owl would not occur.
- ▶ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to LSPGC or PG&E and the CPUC, and no further mitigation shall be required.
- ▶ If an active burrow is found within 1,640 feet of pending construction activities, LSPGC or PG&E shall establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls.
 - During the nonbreeding season (September 1 through January 31), the minimum buffer distance shall be 164 feet (50 meters). During the breeding season (February 1 through August 31), the minimum buffer distance shall be increased to 1,640 feet (500 meters).
 - The buffer may be adjusted if, in consultation with the CDFW, the qualified biologist determines that an alternative buffer shall not result in take of burrowing owl adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, the qualified biologist shall monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist shall have the authority to halt the activities and reestablish a buffer consistent with the first item above until the agitated behavior ceases and normal behavior resumes.
 - The buffer shall remain in place around the occupied burrow and associated satellite burrows until the qualified biologist has determined through noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days.
 - Locations of burrowing owls detected during surveys shall be reported to the CNDDDB within 30 days.

Construction Measure BIO-G [PG&E]: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee

The following measure shall apply for PG&E project components and for Crotch's bumble bee:

- ▶ Initial ground-disturbing work (e.g., grading, vegetation removal, staging) in grassland habitat or edges of agricultural areas that contain grasses or forbs shall take place between August 15 and March 15, if feasible to avoid impacts on nesting Crotch's bumble bees.
- ▶ If the above limited operating period is not feasible (i.e., if limiting ground disturbance to the period between August 15 and March 15 would preclude achieving most of all of the project objectives) as determined by PG&E with concurrence from the CPUC, a qualified biologist approved by the CPUC, familiar with bumble bees of California and experienced using survey methods for bumble bees, shall conduct a habitat assessment and focused survey for Crotch's bumble bee before the start of any ground-disturbing activities in grassland habitat or edges of agricultural areas that contain grasses or forbs. Surveys shall be performed when Crotch's bumble bee is most likely to be identified, typically from April through August (i.e., the colony active period) when floral resources and ideal weather conditions are present, and shall follow the methods in *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023). Surveys shall be conducted during the colony active period the same year as the start of planned construction activities.
- ▶ PG&E shall submit a survey report to the CDFW and the CPUC within 1 month of survey completion and shall notify the CDFW and the CPUC within 24 hours if Crotch's bumble bees are detected.
- ▶ If Crotch's bumble bees are detected during the focused survey, appropriate avoidance measures shall be implemented. Avoidance measures shall include, but not be limited to, the following:
 - Protective buffers shall be implemented around active nesting colonies until these sites are no longer active. A qualified biologist, in coordination with the CDFW, shall determine the appropriate buffer size to protect nesting colonies.
 - If nesting colonies are detected, avoidance areas shall be implemented in areas near the colony location that contain significant floral resources for the colony, if present. A qualified biologist shall determine the appropriate avoidance area size to protect foraging resources.
 - If project activities involving temporary disturbance (e.g., staging) would occur where a nesting colony was detected after the nesting colony is no longer active, the area shall be restored to original conditions after the temporary disturbance is complete such that habitat for Crotch's bumble bee would be available.
- ▶ If take of Crotch's bumble bee cannot be avoided, PG&E shall obtain an Incidental Take Permit (ITP) from the CDFW and shall implement all avoidance measures included in the ITP. The CDFW may also require compensatory mitigation through on-site habitat restoration or purchase of credits at an appropriate mitigation bank. Avoidance measures included in the ITP would reduce the likelihood of take of Crotch's bumble bees such that impacts on the species would be fully mitigated. These measures would include but not be limited to:
 - specifications for construction timing and sequencing requirements to avoid impacts on nesting Crotch's bumble bees;
 - pre-construction surveys conducted within 30 days prior to the start of ground-disturbing activities;
 - establishment of seasonal no-disturbance buffers around nest sites;
 - construction monitoring;
 - restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., BMPs to minimize the spread of invasive plant species); and
 - provisions to avoid Crotch's bumble bees or potential Crotch's bumble bees if observed away from a nest during project activity (e.g., ceasing of project activities until the animal has left the work area).

- ▶ Documentation of compliance with this mitigation measure and any required coordination with the CDFW or acquisition of an ITP shall be provided to the CPUC before commencement of any project construction activities.

Construction Measure BIO-H [PG&E] / Mitigation Measure BIO-7 [LSPGC]: Conduct Focused Surveys for Tulare Grasshopper Mouse and Implement Avoidance Measures

Within 14 days before the initiation of any construction activity, a qualified biologist approved by the CPUC shall conduct a survey for potentially suitable burrows for Tulare grasshopper mouse in suitable shrub and grassland habitat in and within 100 feet of the project alignment area.

- ▶ If no burrows suitable for Tulare grasshopper mouse are found, the qualified biologist shall submit a report summarizing the results of the survey to LSPGC, PG&E, and the CPUC, and further mitigation will not be required.
- ▶ If potential Tulare grasshopper mouse burrows are detected, the qualified biologist shall conduct further investigation to determine whether the burrows are occupied by this species. Further investigation may include live trapping (with Sherman live traps; with an applicable CDFW scientific collecting permit) or noninvasive camera trapping for a minimum of 5 nights. Live trapping surveys associated with LSPGC components may be conducted in conjunction with giant kangaroo rat surveys conducted pursuant to APM BIO-7. The CPUC and CDFW shall approve all trapping plans prior to implementation.
- ▶ If burrows are determined to be occupied by Tulare grasshopper mice, APM BIO-10 shall be implemented for this species for LSPGC project components, and the following measures shall be implemented for PG&E project components consistent with APM BIO-3:
 - If occupied or potentially occupied burrows can be avoided by a minimum of 50 feet, then work can proceed.
 - If occupied or potentially occupied burrows cannot be avoided by 50 feet, then a qualified biologist shall stake and flag an appropriate work-exclusion zone and remain on site as a biological monitor.
 - If avoidance of Tulare grasshopper mouse burrows is not possible, the CDFW will be consulted, and species-specific mortality reduction or avoidance plans will be developed for agency review and approval, as appropriate. These plans may include, but will not be limited to the following:
 - Detailed description of trapping methodology,
 - Detailed burrow excavation methods,
 - Release location(s),
 - Detailed release methods,
 - Artificial burrow design and installation methods,
 - Description of exclusion fencing type and implementation, and
 - Identification of a wildlife rehabilitation center or veterinary facility capable of and willing to treat injured special-status species.
 - Any other construction activities that may adversely affect burrows occupied by Tulare grasshopper mouse (including movement of construction equipment and other activities outside of the fenced/paved areas within wildlife habitat) will be monitored by a qualified biologist. The monitor/inspector will have the authority to stop work activities upon the discovery of sensitive biological resources and allow construction to proceed after the identification and implementation of steps required to avoid or minimize impacts on sensitive resources.

Significance After Mitigation

Implementation of Construction Measures BIO-A through BIO-H and Mitigation Measures BIO-2 through BIO-7, described above, would require surveys and impact avoidance measures for blunt-nosed leopard lizards and other special-status reptiles, western spadefoot toads, burrowing owls, Crotch's bumble bees, and Tulare grasshopper mice, as well as incorporation of survey area minimums, survey timing standards, and applicable protocols for special-

status and common bird surveys conducted pursuant to APMs BIO-18 and BIO-20 and CM BIO-6. Incidental take permitting and compliance with permit requirements would be required if impacts on certain species (blunt-nosed leopard lizard and Crotch's bumble bee) could not be avoided, which may include compensatory mitigation and would fully mitigate impacts on these species pursuant to the CESA. Therefore, with implementation of mitigation measures, impacts on these special-status wildlife would be **less than significant**.

Conclusion

Implementation of Construction Measures BIO-A through BIO-H and Mitigation Measures BIO-2 through BIO-7 would require surveys and avoidance for special-status plant and wildlife species, or measures to compensate for loss of these species, such that impacts would be **less than significant**.

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

LSPGC and PG&E Project Components

The project alignment area and survey area do not contain riparian habitat. Vegetation alliances identified in the project alignment area, the *Amsinckia-Phacelia* alliance and the *Avena* spp.–*Bromus* spp. seminatural alliance, are not considered to be sensitive natural communities.

Conclusion

Because the survey area does not contain riparian habitat or other sensitive natural communities, there would be **no impact** on riparian habitat or sensitive natural communities as a result of project implementation.

- 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?**

LSPGC and PG&E Project Components

Construction, Operation, and Maintenance

As described above, six aquatic features were identified within the survey area that are potentially under the jurisdiction of the USACE, RWQCB, and/or CDFW: four ephemeral streams and two agricultural ditches located along West Manning Avenue (Insignia Environmental 2024). Aquatic features in the western portion of the project alignment area are located where temporary access roads would be constructed; therefore, direct (e.g., removal, fill) or indirect (e.g., disruption of hydrology) impacts on these resources could occur. Other ground-disturbing activities associated with construction or installation of the Manning Substation, access roads, staging areas, TSPs, concrete foundations, and underground fiber cable, as well as vegetation removal and road widening, would occur near identified aquatic features, which could result in indirect effects on these resources. Furthermore, the California Aqueduct would be crossed by the proposed PG&E 230 kV Reconductoring and the proposed LSPGC 230 kV transmission line between South Douglas Avenue and South Lyon Avenue; however, there would be no in-water work or ground disturbance near the California Aqueduct that could result in indirect adverse effects on this resource.

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and repair of roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment) with hand tools. Although infrequent, these activities could result in similar impacts on state and federally protected wetlands as those described above for construction activities if these activities occurred near these resources. Further, much of the survey area was not surveyed due to access constraints, and it is possible that unsurveyed areas may contain state or federally protected wetlands that have not yet been characterized and mapped, and operation and maintenance of LSPGC and PG&E project components could also adversely affect these resources.

Implementation of APMs and CMs

APMs BIO-1 and BIO-3 would apply to the LSPGC project components and would reduce impacts on state and federally protected wetlands by requiring reconnaissance surveys in areas not previously surveyed due to access restrictions (APM BIO-1) and by requiring WEAP training for project personnel (APM BIO-3).

CM BIO-1 and CM GEN-1 would apply to the PG&E project components and would reduce impacts on state and federally protected wetlands by requiring WEAP training for project personnel (CM BIO-1) and surveys in areas not previously surveyed due to access restrictions (CM GEN-1)

Significance before Mitigation

While implementation of LSPGC APMs and PG&E CMs would reduce impacts on state or federally protected wetlands by requiring reconnaissance surveys in areas not previously surveyed due to access restrictions and WEAP training, the APMs and CMs do not describe methods for avoiding state and federally protected wetlands or describe the compensation that would be required if there are impacts on these resources. Construction of LSPGC and PG&E project components may result in substantial direct or indirect adverse effects on state or federally protected wetlands. Impacts on these resources would be significant without mitigation.

Construction Measures and Mitigation Measures

Construction Measure BIO-I [PG&E] / Mitigation Measure BIO-8 [LSPGC]: Identify State or Federally Protected Wetlands in Unsurveyed Areas

If, after implementation of APM BIO-1 (LSPGC) or CM GEN-1 (PG&E), it is determined that state or federal wetlands may be present in unsurveyed portions of the project alignment area, LSPGC and/or PG&E shall retain a qualified biologist, hydrologist, or wetland ecologist approved by the CPUC to prepare a formal delineation of the boundaries of state or federally protected wetlands that are within the project alignment area and may be directly or indirectly adversely affected according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the Arid West regional supplement (Environmental Laboratory 2008). The qualified biologist will also delineate the boundaries of wetlands that may not meet the definition of waters of the United States, but would qualify as waters of the state, according to the state wetland procedures (SWRCB 2021).

Construction Measure BIO-J [PG&E] / Mitigation Measure BIO-9 [LSPGC]: Implement Avoidance Measures for State or Federally Protected Wetlands and Obtain Permits for Impacts on Wetlands

- ▶ If potential state or federally protected wetlands identified in the project alignment area can be avoided, a qualified biologist approved by the CPUC shall establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone shall be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., seasonal wetland, seep, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented.
 - Project activities (e.g., ground disturbance, vegetation removal, staging) shall be prohibited within the established buffer. The qualified biologist shall periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided.
- ▶ If it is determined that disturbance or fill of potential state or federally protected wetlands or waters cannot be avoided, LSPGC and/or PG&E shall submit the appropriate permit applications to the relevant regulatory agencies (e.g., USACE, RWQCB).
- ▶ If it is determined that fill of waters of the United States would result from project implementation, LSPGC and/or PG&E shall secure authorization for such fill from the USACE through the Section 404 permitting process. Any waters of the United States that would be affected by the project shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE mitigation guidelines in place at the time of construction. In

association with the Section 404 permit (if applicable) and prior to the issuance of any grading permit, a Section 401 Water Quality Certification shall be obtained from the Central Valley RWQCB. For impacts on waters of the state that are not also waters of the United States and are therefore not covered by the 401 Water Quality Certification, the applicant shall apply to the RWQCB for Waste Discharge Requirements following the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). Any waters of the United States or waters of the state that are to be affected by the project shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE and SWRCB mitigation standards in place at the time of construction.

- ▶ If it is determined that disturbance or fill of state protected waters cannot be avoided, LSPGC and/or PG&E shall notify the CDFW before commencing activity that may divert the natural flow or otherwise alter the bed, or bank of any 1602 jurisdictional waterway. If project activities trigger the need for a Lake or Streambed Alteration Agreement, LSPGC and/or PG&E shall obtain such an agreement from the CDFW before the activity commences. LSPGC and/or PG&E shall conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of a lake or stream. These measures may include but shall not be limited to demarcation of the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management) such that there would be no net loss.

Conclusion

Implementation of Construction Measures BIO-I and BIO-J/Mitigation Measures BIO-8 and BIO-9 would require delineation of state or federally protected wetlands in areas that have not yet been surveyed due to access restrictions, as well as implementation of avoidance measures or compensation and permitting for impacts on state and federally protected wetlands. Therefore, with implementation of mitigation measures, impacts on state or federally protected wetlands would be **less than significant**.

- 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?**

LSPGC and PG&E Project Components

The California Essential Habitat Connectivity Project identified Natural Landscape Blocks and Essential Connectivity Areas (ECAs) throughout the state (Spencer et al. 2010). The project alignment area is composed primarily of agricultural habitat, which does not provide high quality habitat for wildlife movement. There are no ECAs or natural landscape blocks mapped in the project alignment area. Furthermore, the project alignment area crosses I-5, which is a significant barrier to wildlife movement. The project alignment area does not currently function as a critical habitat linkage or as a significant movement corridor for wildlife species.

Construction of LSPGC and PG&E project components would involve installation of new transmission structures. Some new transmission lines would be created in areas where none existed previously; however, the orientation of most new transmission lines would be parallel and in close proximity to existing lines. The presence of new transmission lines where none currently exist would present a new collision risk to bird species, particularly at night and during inclement weather. As described in Table 3.4-2, the survey area does not contain roosting habitat suitable for bats and is not expected to contain significant wildlife nursery sites.

Electrocution may occur on transmission lines and certain substation components. These risks occur when there is inadequate vertical and horizontal separation between components, enabling larger birds to make simultaneous contact with their wings or other body parts. While the chances of electrocution from lines greater than 60 kV are low due to the standard phase-to-phase and phase-to-ground separation distance (APLIC 2006), if energized parts remain uncovered, the risk of electrocution increases. Collision or electrocution could cause direct injury or mortality of special-status and common bird species.

Significance before Mitigation

The project alignment area likely does not function as a critical habitat linkage and does not contain habitat that would support wildlife nursery sites. However, new transmission lines constructed as part of the project could increase the risk of collision or electrocution of migrating birds. Collision or electrocution could cause direct injury or mortality of special-status and common bird species. Impacts on these resources would be significant without mitigation.

Mitigation Measures

Construction Measure BIO-K [PG&E] / Mitigation Measure BIO-10 [LSPGC]: Develop and Implement an Avian Protection Plan

- ▶ PG&E shall implement its Avian Protection Plan, *PG&E's Program to Address Avian Electrocutions, Collisions, and Nesting Birds* (PG&E 2018), including all risk reduction measures and training and reporting requirements therein.
- ▶ LSPGC must follow the recommendations outlined in *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012 or the most current version). In addition, LSPGC shall develop and implement an Avian Protection Plan according to the Avian Protection Plan Guidelines (APLIC and USFWS 2005). The plan shall include measures to minimize collision and electrocution risk to avian species during project operation. The plan shall be submitted for review to the CDFW and USFWS at least 60 days before construction begins.

Conclusion

Implementation of Construction Measure BIO-K/Mitigation Measure BIO-10 would require development and implementation of Avian Protection Plans, which would include measures to minimize collision and electrocution risk to avian species and to avoid interference with wildlife movement. Therefore, with implementation of mitigation measures, this impact would be **less than significant**.

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

The Fresno County General Plan (Fresno County 2024) includes policies that apply to biological resources in the county as described in Section 3.4.2, "Regulatory Setting," above. These policies require protection of wetlands, wildlife habitat, special-status wildlife, habitat corridors, nesting birds, and landmark trees. Policy OS-E.9 also requires a biological resources evaluation of the project site by a qualified biologist prior to permit approval. Impacts on special-status species and their habitat (see item a. above) and wetlands (see item c. above) are described above. The following analysis includes local policies that are not already addressed in another impact discussion.

LSPGC and PG&E Project Components

Although LSPGC and PG&E are not subject to local (city and county) discretionary regulations, any actions that conflict with the local policies and ordinances described above in Section 3.4.2, "Regulatory Setting," could affect biological resources in the study area. A Biological Resources Technical Report was prepared for the project (Insignia Environmental 2024), which is consistent with Fresno County General Plan Policy OS-E.9. In addition, no trees would be removed as a result of project implementation, except for orchard trees, which would be consistent with Fresno County General Plan Policy OS-F.4 regarding landmark trees.

Conclusion

The project is consistent with Fresno County General Plan policies that pertain to biological resources; therefore, there would be no conflict with these policies, and this impact would be **less than significant**.

- 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?**

LSPGC Project Components

LSPGC is not a participant in the PG&E SJVHCP, and therefore, construction, operation, and maintenance of LSPGC project components would not conflict with the plan. There are no other HCPs in the project alignment area.

PG&E Project Components

Operation and maintenance of PG&E project components would be subject to the PG&E SJVHCP. Five plant species and seven wildlife species covered under the PG&E SJVHCP may occur in the survey area (Table 3.4-1; Table 3.4-2). PG&E is required to participate in the SJVHCP for operation and maintenance activities, would also be required to implement applicable AMMs, and is covered by associated take permitting for species covered under the plan. SJVHCP AMMs include general construction best management practices (e.g., erosion prevention, trash abatement, vehicle speed limits, site restoration), and surveys and protection measures for covered plant and wildlife species, including those that may occur in the project alignment area.

Conclusion

LSPGC is not subject to any conservation plan and the project is consistent with the PG&E SJVHCP, which is the only applicable conservation plan. Therefore, there would be no conflict with this plan, and this impact would be **less than significant**.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially disturb 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

The following regional and historic era setting information is based on the *Cultural Resources Assessment for the Manning 500/230KV Substation Project, Fresno County, California*, prepared by LSPGC for the project and reviewed by Ascent (Chronicle Heritage 2024).

REGIONAL PRECONTACT HISTORY

The general trend throughout California precontact history has been an increase in population density over time, coupled with greater sedentism and the use of a greater diversity of food resources. There is abundant evidence that humans have been present in the Americas for at least the past 11,500 years. Cultural groups within the vicinity of the project alignment area are subdivided into two types: the Foothill Tradition and the Valley Tradition. Given the project alignment area’s location in the western San Joaquin Valley, Valley Tradition site types and artifacts are the most likely type to be encountered.

Paleoindian Period: The Paleoindian Period has a relatively faint cultural resource footprint in California. The earliest sites in the San Joaquin Valley are Fluted Point Tradition and Western Pluvial Lakes Tradition sites found at Tracy, Tulare and Buena Vista lakes. Sites of this antiquity are few and remain mostly undated by scientific means, but artifact types indicate probable ages of 7,500–11,500 years old. Radiocarbon age determinations of human bone from the Witt site at Tulare Lake yielded dates of 11,379 and 15,802 radiocarbon years before present (BP).

Lower Archaic Period (10,550–7,550 BP): The Lower Archaic economy appears to have emphasized mobile foraging. Artifact types found in these sites include handstones, milling slabs, and various cobble tools. Relationships between foothill and valley floor archaeology have not been explored for this early period, primarily because Valley archaeology from the Lower Archaic and Early Middle Archaic periods lacks data. Thus, it is unclear to researchers whether Foothill sites and Valley sites are two different cultural traditions or seasonal expressions of a single culture.

The Middle Archaic Period (7,550–2,550 BP): More distinct cultural adaptations for the valley floor and foothills are visible in sites that date to the Middle Archaic. Artifact assemblages for the Foothill Tradition are composed of flaked stone dart points and cobble tools like those of the Lower Archaic. Tabular pendants, incised slate, and perforated stone plummets are rare, but nevertheless have wide distribution. Middle Archaic Foothill sites also are characterized by rock-filled hearths and ovens, and “cairn-capped” graves.

The Upper Archaic Period (2,550–850 BP): The technologies that existed in the Middle Archaic became highly specialized in the Upper Archaic, as evidenced by new types of tools and widely traded goods, like saucer- and saddle-shaped Olivella beads, *Haliotis* ornaments, obsidian biface “roughouts,” and ceremonial blades. Native economies focused on seasonally available resources that could be harvested and processed in large quantities, such as acorns. Although the Berkeley Pattern began to emerge during this time, as evidenced by large accumulations of habitation debris reflecting long-term habitation, the Windmill Pattern continued as well. There is only one archaeological site in the region, CA-SAC-107, that provides an example of the Berkeley Pattern replacing Windmill.

The Emergent Period (850–European Contact): The Augustine Pattern coincides with the Late or Emergent Period (further divided into Lower and Upper), ranging from as early as 3,100 BP to the time of European settlement of this general area in the late 1700s. Intensive fishing, hunting, and harvesting of acorns and small hard seeds typify this period. A general increase in population and settlements, a more regularized exchange system, and increased evidence of ceremonialism characterize the Augustine Pattern. Distinctive artifacts include small notched projectile points indicative of the introduction and spread of bow-and-arrow technology, bone awls used in basketry preparation, clay effigies, elaborately incised bone whistles, flanged soapstone pipes, and occasional pottery.

HISTORIC ERA SETTING

The history of California can be divided into several periods of influence to establish a historic context that can be used to assess the potential significance of historic sites within the boundaries of the project alignment area. Due to its location 75 miles west of the coast, the location of the project alignment area was largely isolated during the Spanish and Mexican periods of California. Therefore, events associated with the Spanish and Mexican periods, and cultural remains from those periods, are not expected to be reflected in surface and subsurface contexts within the project alignment area.

Spanish Era (1769–1821): In 1542 Juan Rodriguez Cabrillo led the first European expedition into California. Over the following 200 years, Cabrillo; other Spanish explorers; and Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions but did not establish permanent settlements.

The first permanent European settlement in what is today California was established by Gaspar de Portola and Franciscan Father Junipero Serra at Mission San Diego de Alcala in 1769. This was the first of 21 missions to be established by the Spanish between 1769 and 1823. In 1772, Pedro Fages led the first European expedition into the San Joaquin Valley. Numerous expeditions were made into the San Joaquin Valley in the 1800s in search of new lands for missions and to recapture runaway neophytes. Although there were numerous expeditions into the San Joaquin Valley, no formal settlements were ever established.

During this period, Spain deeded tracts of land known as “ranchos” to prominent citizens and soldiers, none of which were located within the San Joaquin Valley. To manage these lands, herds, and crops, the colonists captured numerous Native Americans as laborers. Due to the lack of settlements within the San Joaquin Valley, very few Central Valley tribes were directly affected, with the exception of disease that was transmitted by Europeans and greatly reduced the Native American population throughout California.

Mexican Era (1822–1848): The Mexican Period started in 1822, following the successful Mexican Revolution (1810–1821). During this period, there was extensive inland exploration and development by American fur trappers. Starting in 1883, mission lands were converted into ranchos, and more than 600 ranchos were established between 1833 and 1846. None of these ranchos were established in the San Joaquin Valley.

American Period (1848–Present): The American Period began with the ending of the Mexican American War and the signing of the Treaty of Guadalupe Hildago in 1848. The U.S. Government agreed to pay \$15 million for territories taken during the war, which included California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming.

Populations increased in 1849 with the discovery of gold in northern California. In 1850, California was admitted to the United States, and by 1853 the population had exceeded 300,000. Populations continued to increase, especially after 1869, with the completion of the transcontinental railroad. Fresno County was established on April 19, 1856, and

generally experienced four stages of development throughout its history. The first was the mining period, which continued into the 1860s.

The mining period was followed by the sheep and cattle ranching period, which lasted from the 1860s to 1874. The general farming period started in the 1870s and was followed by the establishment of irrigated row crops. Today, Fresno County produces more than 350 commercial crops and has 1.88 million acres of farmland. The unincorporated community of Three Rocks is 4.7 miles south of the project alignment. This community is named after the geological feature of Three Rocks, which was purported to be a hideout and headquarters of Joaquin Murrieta, a Mexican miner and bandit who was known for terrorizing mining camps and stagecoaches.

RECORDS SEARCHES AND SURVEY RESULTS

A records search of the project alignment was conducted by the Southern San Joaquin Valley Information Center at California State University, Bakersfield (File No. 23-352) on August 28, 2023, and November 13, 2023. The records searches included a 1-mile search radius around the proposed substation site and a 0.5-mile search radius around the linear transmission line components. Because the project alignment area includes a 250-foot buffer around the project components, the records search radius extended from the edge of this buffer.

The results of the records searches identified four previously recorded cultural resources within the 0.5-mile search radius of the project alignment area and one cultural resource within the project alignment area. The one cultural resource within the project alignment area is a single built-environment linear feature, which consists of a segment of I-5 (P-10-007205). No archaeological sites were identified within the project alignment area.

P-10-007205, known as I-5, Montgomery Freeway, San Diego Freeway, Santa Ana Freeway, Golden State Freeway, and West Side Freeway, consists of a major north-south trending multilane paved freeway that spans a total of 1,380 miles from the Mexican border in San Diego, California, to the Canadian border in Washington State, with 800 miles located within California. In 2020, I-5 was evaluated and found ineligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A, B, C, or D and in the California Register of Historical Resources (CRHR) under Criterion 1, 2, 3, or 4 (see Section 3.5.2 for a description of the criteria). Therefore, I-5 (P-10-007205) is not considered a resource under CEQA and was not evaluated during the project pedestrian survey.

Chronicle Heritage conducted an intensive pedestrian survey of the project alignment between November 6 and November 28, 2023. The pedestrian survey was conducted using transects spaced between 10 and 15 meters apart. During the survey, the project alignment area was examined for the presence of historic or precontact period cultural materials. Historic period cultural materials include foundations, fence lines, ditches, standing buildings, objects, structures such as sheds, or concentrations of materials such as domestic refuse (e.g., glass bottles, ceramics, toys, buttons, and leather shoes), refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, and horseshoes), or structural materials (e.g., nails, glass windowpanes, corrugated metal, wood posts or planks, metal pipes and fittings). Precontact site cultural materials include midden, ash, and charcoal deposits, as well as faunal bone (burned or unburned), shell, flaked stone, ground stone, and human remains.

The pedestrian survey covered approximately 1,859 acres of the 3,229 acres that compose the project alignment area. Multiple areas of the project alignment have not yet been surveyed due private property access restrictions (Chronicle Heritage 2024). The pedestrian survey did not identify any new cultural resources.

3.5.2 Regulatory Setting

FEDERAL

National Register of Historic Places

The NRHP is the nation's master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:
 - Criterion A Is associated with events that have made a significant contribution to the broad patterns of history (events).
 - Criterion B Is associated with the lives of persons significant in the past (persons).
 - Criterion C Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).
 - Criterion D Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

For a property to retain and convey historic integrity, it must possess most of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Location is the place where the historic property was constructed or the place where a historic event occurred. Integrity of location refers to whether the property has been moved since its construction. Design is the combination of elements that create the form, plan, space, structure, and style of a property. Setting is the physical environment of a historic property that illustrates the character of the place. Materials are the physical elements that were combined or deposited during a particular period and in a particular pattern or configuration to form a historic property. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Feeling is a property's expression of the aesthetic or historic sense of a particular period. This intangible quality is evoked by physical features that reflect a sense of a past time and place. Association is the direct link between the important historic event or person and a historic property. Continuation of historic use and occupation help maintain integrity of association.

Listing in the NRHP does not entail specific protection or assistance for a property, but it does guarantee consideration in planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. In addition, project effects on properties listed in the NRHP must be evaluated under CEQA.

The National Register Bulletin series was developed to assist evaluators in the application of NRHP criteria. For example, National Register Bulletin #36 provides guidance in the evaluation of archaeological site significance. If a property cannot be placed within a particular theme or time period, and thereby lacks "focus," it will be unlikely to possess characteristics that would make it eligible for listing in the NRHP. Evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, and flumes) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length, (2) presence of distinctive engineering features and associated properties, (3) structural integrity, and (4) setting. The highest probability for NRHP eligibility exists in the intact, longer segments, where multiple criteria coincide.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the CRHR. The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a statewide program with a scope and with criteria for inclusion that are similar to those used for the NRHP. In addition, properties designated under municipal or County ordinances are also eligible for listing in the CRHR. California Historical Landmarks—buildings, structures, sites, or places that have been determined to have statewide historical significance—are also automatically listed in the CRHR. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria listed below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

- Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or to the cultural heritage of California or the United States.
- Criterion 2. Is associated with the lives of persons important to local, California, or national history.
- Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
- Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to PRC 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." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources. PRC Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR is considered a historical resource (PRC Section 5024.1).
- 2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g). (Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.)

- 3) Any object, building, structure, site, area, place, record, or manuscript that 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, provided the lead agency's determination is supported by substantial evidence in light of the whole record. (Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR [PRC Section 5024.1].)

The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or not identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) and 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects would affect unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means 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 one or more of the following criteria:

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

Public Resources Code Section 21083.2

Treatment options under PRC Section 21083.2(b) to mitigate impacts on archaeological resources include activities that preserve such resources in place in an undisturbed state. PRC Section 21083.2 states:

- (a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued.
- (b) If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:
 - (1) Planning construction to avoid archaeological sites.
 - (2) Deeding archaeological sites into permanent conservation easements.
 - (3) Capping or covering archaeological sites with a layer of soil before building on the sites.
 - (4) Planning parks, greenspace, or other open space to incorporate archaeological sites.
- (c) To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision. The project applicant shall provide a guarantee to the lead agency to pay one-half the estimated cost of mitigating the significant effects of the project on unique archaeological resources. In determining payment, the lead agency shall give due consideration to the in-kind value of project design or expenditures that are intended to permit any or all archaeological resources or California Native American culturally significant sites to be preserved in place or left in an undisturbed state. When a final decision is made to carry out or approve the project, the lead agency shall, if necessary, reduce the specified mitigation measures to those which can be funded with the money guaranteed by the project applicant plus the money voluntarily guaranteed by any other person or persons for those

mitigation purposes. In order to allow time for interested persons to provide the funding guarantee referred to in this subdivision, a final decision to carry out or approve a project shall not occur sooner than 60 days after completion of the recommended special environmental impact report required by this section.

- (d) Excavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archaeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report.
- (e) In no event shall the amount paid by a project applicant for mitigation measures required pursuant to subdivision (c) exceed the following amounts:
 - (1) An amount equal to one-half of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a commercial or industrial project.
 - (2) An amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a housing project consisting of a single unit.
 - (3) If a housing project consists of more than a single unit, an amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of the project for the first unit plus the sum of the following:
 - (A) Two hundred dollars (\$200) per unit for any of the next 99 units.
 - (B) One hundred fifty dollars (\$150) per unit for any of the next 400 units.
 - (C) One hundred dollars (\$100) per unit in excess of 500 units.

Health and Safety Code Sections 7050.5

Section 7050.5 of the California Health and Safety Code (HSC) requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact Native American Heritage Commission (NAHC).

Public Resources Code Section 5097

PRC Section 5097 specifies the procedures to be followed if cultural resources are unexpectedly discovered on nonfederal public land, and in particular, human remains. Section 5097.5 of the code states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. However, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024) includes the following policies that are relevant to cultural resources affected by the project:

- ▶ **OS-J.1: Preservation of Historic Resources.** The County shall encourage preservation of any sites and/or buildings identified as having historical significance pursuant to the list maintained by the Fresno County Historic Landmarks and Records Advisory Commission.
- ▶ **OS-J.2: Historic Resources Consideration.** The County shall consider historic resources during preparation or evaluation of plans and discretionary development projects that may impact buildings or structures. For a project projected on a property that includes buildings, structures, objects, sites, landscapes, or other features that are 45 years of age or older at the time of permit application, the project applicants shall be responsible for preparing and implementing the recommendations of a historical resources evaluation completed by qualified cultural resources practitioners.
- ▶ **OS-J.3: Minimize Impacts.** Whenever a historical resource is known to exist on a proposed project site, the County (i.e., Fresno County Historic Landmarks and Records Advisory Commission) shall evaluate and make recommendations to minimize potential impacts to said resource.
- ▶ **OS-J.4: Cultural Resources Protection and Mitigation.** The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archeological, tribal, paleontological, and cultural sites and resources. For projects requiring ground disturbance and located within a high or moderate cultural sensitivity areas, a cultural resources technical report may be warranted, including accurate archival research and site surveys conducted by qualified cultural resources practitioners. The need to prepare such studies shall be determined based on the tribal consultation process and initial outreach to local or state information centers.
- ▶ **OS-J.5: Archaeological Sites Confidentiality.** The County shall, within the limits of its authority and responsibility, maintain confidentiality regarding the location of archeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.
- ▶ **OS-J.6: Native American Consultation.** The County shall solicit the views of the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or sites of cultural importance.
- ▶ **OS-J.7: Historical Sites Inventory.** The County shall maintain an inventory of all sites and structures in the county determined to be of historical significance (Index of Historic Properties in Fresno County).
- ▶ **OS-J.8: Landmark Designations.** The County shall support the registration by property owners and others of cultural resources in appropriate landmark designations (i.e., National Register of Historic Places, California Historical Landmarks, Points of Historical Interest, or Local Landmark).
- ▶ **OS-J.9: Historical Site Markers.** The County shall provide for the placement of historical markers or signs on adjacent county roadways and major thoroughfares to attract and inform visitors of important historic resource sites. If such sites are open to the public, the County shall ensure that access is controlled to prevent damage or vandalism.
- ▶ **OS-J.10: Cultural Resource Preservation.** The County shall use the State Historic Building Code and existing legislation and ordinances to encourage preservation of cultural resources and their contributing environment.

3.5.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that will apply to the PG&E components of the project. The proposed project includes the following APMs and CMs related to cultural resources.

LSPGC APMs

The following APMs would be implemented for the LSPGC project components:

- ▶ **APM CUL-1: Cultural Resources Awareness Training.** In accordance with this measure, the project's WEAP will 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 project;
 - A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and policies; and
 - A statement by the construction company or applicable employer agreeing to abide by the WEAP, and other applicable laws and regulations.

The WEAP will be provided to all project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in ground-disturbing activities without having participated in the WEAP.

- ▶ **APM CUL-2: Avoid Environmentally Sensitive Areas (ESAs).** Cultural resources surveys will be performed for any portion of the project alignment area not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas). Cultural resources discovered during surveys will be subject to a 50-foot buffer around the boundary of each respective resource and designated as ESAs. Methods of ESAs delineation may include, as applicable, flagging, rope, tape, or fencing. The ESAs shall be clearly marked on all pertinent construction plans. Where operationally feasible, all NRHP- and CRHR-eligible resources would be protected from direct project impacts by project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas). In addition, all historic properties/historical resources will be avoided by all project construction and restoration activities, where feasible. If work within the 50-foot buffer cannot be avoided, then monitoring will be required.
- ▶ **APM CUL-3: Inadvertent Discoveries.** In the event that previously unidentified cultural resources are uncovered during implementation of the project, all work within 50 feet of the discovery will be halted and redirected to another location. A qualified archaeologist(s) will inspect the discovery and determine whether further investigation is required. The qualifications of the archaeologist(s) will be approved by the CPUC. If the discovery can be avoided and no further impacts would occur, the resource will be documented on California Department of Parks and Recreation cultural resources records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, the significance and NRHP and CRHR eligibility of the resource will be evaluated and, in consultation with the CPUC, appropriate treatment measures will be determined. All work will remain halted until a Secretary of the Interior-qualified archaeologist approves the treatment measures. Preservation in place would be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Guidelines Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, and if the unearthed resource is precontact or Native American in nature, a Native American representative, in consultation with the CPUC, will develop additional treatment measures, such as data recovery consistent with CEQA Guidelines Section 15126.4(b)(3)(C-D). Archaeological materials recovered during any

investigation would be curated at an accredited curation facility or transferred to the appropriate tribal organization.

PG&E CMs

The following CMs would be implemented for the PG&E project components:

- ▶ **CM CUL-1: Worker Environmental Awareness.** PG&E will provide environmental awareness training on archaeological and paleontological resources protection. This training may be administered by the PG&E cultural resources specialist (CRS) or a designee as a stand-alone training or included as part of the overall environmental awareness training as required by the project and will at minimum include: types of cultural resources or fossils that could occur at the project alignment; types of soils or lithologies in which the cultural resources or fossils could be preserved; procedures that should be followed in the event of a cultural resource, human remain, or fossil discovery; and penalties for disturbing cultural or paleontological resources.
- ▶ **CM CUL-2: Flag and Avoid Known Resources.** Sites will be marked with flagging tape, safety fencing, and/or sign designating it as an ESA to ensure that PG&E construction crews and heavy equipment will not intrude on these sites during construction. At the discretion of the PG&E CRS, monitoring may be done in lieu of or in addition to flagging. If it is determined that the project cannot avoid impacts on one or more of the sites, then, for those sites that have not been previously evaluated, evaluation for inclusion in the NRHP/CRHR will be conducted. Should the site be found eligible, appropriate measures to reduce the impact to a less-than-significant level will be implemented, including but not limited to data recovery, photographic and archival documentation, or other measures as deemed appropriate. If it is determined that sites that have been previously determined to be eligible for inclusion in either the NRHP or CRHR cannot be avoided, measures will be implemented to reduce the impact to a less-than-significant level, including but not limited to data recovery, photographic and archival documentation, or other measures as deemed appropriate.
- ▶ **CM CUL-3: Unanticipated Cultural Resource and Paleontological Discoveries:**
 - a. **Unanticipated Cultural Resources.** If unanticipated cultural resources are inadvertently discovered during site preparation or construction activities, work will stop in that area and within 50 feet of the find until the CRS or their qualified designee can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with PG&E and other appropriate agencies. Work may continue on other portions of the site with the CRS's approval. PG&E will implement the CRS's or their designee's recommendations for treatment of discovered cultural resources.
 - b. **Human Remains.** In the unlikely event that human remains or suspected human remains are uncovered during pre-construction testing or during construction, all work within 50 feet of the discovery will be halted and redirected to another location. The find will be secured, and the CRS or designated representative will be contacted immediately to inspect the find and determine whether the remains are human. If the remains are not human, the CRS will determine whether the find is an archaeological deposit and whether paragraph (a) of this APM should apply. If the remains are human, the CRS will immediately implement the applicable provisions in PRC Sections 5097.9 through 5097.994, beginning with the immediate notification to the affected county coroner. The coroner has two working days to examine human remains after being notified. If the coroner determines that the remains are Native American, HSC 7050.5 and PRC Section 5097.98 require that the CRS contact the NAHC within 24 hours. The NAHC, as required by PRC Section 5097.98, will determine and notify the MLD.
 - c. **Paleontological Discoveries.** If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with a qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted

in consultation with the landowner, PG&E, and the CPUC. The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.

3.5.4 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

LSPGC and PG&E Project Components

Construction

Ground disturbance associated with construction or installation of the Manning Substation, access roads, staging areas, TSPs, concrete foundations, and underground fiber cable, as well as vegetation removal and road widening could result in direct impacts on historical resources if present in the project alignment area. However, no demolition of existing structures is planned.

The one previously recorded built-environment resource located in the project alignment, I-5 (P-10-007205), has been determined to not be NRHP or CRHR eligible. This resource comprises a maintained and paved roadway (I-5) that would not be impacted by construction. The results of the pedestrian survey did not identify new built-environment resources within the surveyed areas of the project alignment. However, project construction may result in damage to or destruction of a potential historic resource in the areas of the project alignment that have not been surveyed.

Operation and Maintenance

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment) with hand tools. Any historical resources within the project alignment area would be fully avoided by the implementation of CMs, APMs, and mitigation measures as described below. Therefore, there would be no historical resources within the completed project site. The project would not demolish, relocate, or alter a historical resource. Therefore, operation and maintenance of the project would not cause a substantial adverse change in the significance of a cultural resource.

Implementation of APMs and CMs

To address potential impacts on historic resources from LSPGC project components, a WEAP would be developed to train construction personnel to identify potential cultural resources (e.g., built-environment resources) during construction, in accordance with APM CUL-1. The WEAP would provide construction personnel with instruction on compliance with APMs and mitigation measures. Pursuant to LSPGC APM CUL-2, cultural resources surveys would be conducted prior to construction for any areas that were not previously surveyed by LSPGC, which may include areas where landowner permission was not obtained. Any discoveries during surveys would be subject to a 50-foot buffer around the boundary of each respective resource and designated as ESAs. If work within the 50-foot buffer cannot be avoided, then monitoring would be required.

To address potential impacts on historic resources from PG&E project components, a WEAP would be developed to train construction personnel on the recognition of potential cultural resources (e.g., built-environment resources) during construction, in accordance with PG&E's CM CUL-1. The WEAP would provide construction personnel with instruction on compliance with CMs and mitigation measures. Pursuant to CM CUL-2, potential historic resources would be marked with flagging tape, safety fencing, and/or signs designating them as ESAs to ensure that PG&E construction crews and heavy equipment would not intrude on these sites during construction. At the discretion of the PG&E CRS, monitoring may be done in lieu of or in addition to flagging.

Significance before Mitigation

While implementation of LSPGC APM CUL-2 would reduce impacts on historical resources by requiring a cultural survey of the project alignment areas that have not been surveyed and by providing procedures in case of discoveries, the APM covers only the LSPGC components. In addition, APM CUL-2 and CM CUL-2 lack clarity regarding treatment and preservation of resources.

There is potential for historical resources to be identified in previously unsurveyed areas covered by PG&E project components. Conservatively, this analysis assumes that any potential historical resource encountered in unsurveyed areas is a historical resource as defined by State CEQA Guidelines Section 15064.5(a). If historical resources exist within the unsurveyed areas of the project alignment, construction of proposed project components could damage, destroy, or otherwise cause an adverse substantial change to their significance. Therefore, this impact would be significant without mitigation.

Construction Measures and Mitigation Measures

Construction Measure CR-A [PG&E] / Mitigation Measure CR-1 [LSPGC]: Conduct Built Environment Historical Resources Surveys for Built Environment Resources

The following measure shall apply to LSPGC project and PG&E components and shall supersede and replace LSPGC APM CUL-2 and PG&E CM CUL-2, as presented in the PEA, for historic resources:

Prior to the start of construction, a qualified architectural historian who meets the U.S. Secretary of the Interior Professional Qualifications Standards for History or Architectural History and approved by the CPUC shall perform historical resources surveys for built environment features for any portion of the project alignment area not yet surveyed (e.g., private properties with access restrictions) within PG&E or LSPGC project component areas. PG&E and LSPGC shall be responsible for ensuring that historical resources surveys for built environment features are conducted throughout all portions of their respective project component areas. For the purposes of this mitigation measure, built-environment features 50 years and older discovered during surveys shall be assumed to be historical resources as defined by State CEQA Guidelines Section 15064.5, and depending on whether the location of the resource is in LSPGC's or PG&E's project area, either LSPGC or PG&E shall be required to comply with Mitigation Measure CR-B. All such resources will be recorded on a California Department of Parks and Recreation DPR 523 primary form or equivalent documentation by a qualified architectural historian.

Construction Measure CR-B [PG&E] / Mitigation Measure CR-2 [LSPGC]: Protect Historical Built Environment Resources

The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APM CUL-2 and PG&E CM CUL-2, as presented in the PEA, for built environment historic resources:

If a built environment historical resource is identified in the project area, PG&E or LSPGC (as applicable, depending on whether the location of the resource is in LSPGC's or PG&E's project area) shall redesign the project to avoid direct or indirect impacts to the building or structure.

Significance after Mitigation

APM CUL-2 and CM CUL-2 lack clarity regarding the treatment and preservation of resources. To provide necessary clarity, Construction Measures CR-A and CR-B and Mitigation Measures CR-1 and CR-2 shall supersede and replace APM CUL-2 and CM CUL-2. With implementation of LSPGC APM CUL-1, PG&E CM CUL-1, and Construction Measures CR-A and CR-B and Mitigation Measures CR-1 and CR-2, no substantial adverse changes related to historical resources or impacts on historical resources, as defined in PRC Section 15064.5, would occur. The APMs and CMs require WEAP training for construction personnel, avoidance of built-environment resources, and archival documentation if appropriate. Construction Measures CR-A and CR-B and Mitigation Measures CR-1 and CR-2 require cultural surveys of PG&E areas that have not been surveyed and provide protective measures (consistency with the Secretary of the Interior's Standards) in case a historical resource is identified. Construction Measures CR-A and CR-B and Mitigation Measures CR-1 and CR-2 would ensure avoidance and protection of historic resources; therefore, this impact would be **less than significant**.

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

LSPGC and PG&E Project Components

Construction

Ground disturbance associated with construction or installation of the LSPGC and PG&E project components could result in direct impacts on archaeological resources if present in the project alignment area. Archaeological resources may be damaged or destroyed from vehicle and equipment operation, vegetation trimming and removal, soil excavation and compaction, and grading. The records search results did not reveal any archaeological resources within the project alignment area. Similarly, the results of the pedestrian survey did not identify new archaeological resources within the surveyed areas of the project alignment. However, there is potential for previously unrecorded archaeological resources to be present in the areas of the project alignment that have not been surveyed, as well as unanticipated discovery of below-ground archaeological resources. Such resources may be adversely impacted by project construction activities.

Operation and Maintenance

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment) with hand tools. These activities do not have the potential to result in a substantial change to the level of significance of an archaeological resource because the operation and maintenance activities would require minimal to no ground disturbance that could damage an archaeological resource.

Implementation of APMs and CMs

To address potential impacts on unanticipated archaeological resources from construction of LSPGC project components, a WEAP would be developed to train construction personnel to identify potential cultural resources (e.g., archaeological resources) during construction, in accordance with APM CUL-1. The WEAP would provide construction personnel with instruction on compliance with APMs and mitigation measures developed after pre-construction surveys. Pursuant to APM CUL-2, cultural resources surveys would be conducted prior to construction for any LSPGC areas that were not previously surveyed, which may include areas where landowner permission was not obtained. Where operationally feasible, all CRHR-eligible resources would be protected from direct project impacts by redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas) should they be found to be in conflict with the project alignment footprint. APM CUL-3 would require that previously unidentified cultural resources, if uncovered during excavation, be inspected by a qualified archeologist. The qualified archeologist would determine whether further investigation is required. If the discovery can be avoided and no further impacts would occur, the resource would be documented in California Department of Parks and Recreation cultural resources records. If the resource could not be avoided, the significance and CRHR eligibility of the resource would be evaluated and, in consultation with the CPUC, appropriate treatment measures would be determined. Preservation in place would be the preferred means to avoid impacts on significant historical resources. Consistent with CEQA Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, the qualified archaeologist, in consultation with the CPUC (and, if the unearthed resource is precontact or Native American in nature, the Native American representative), would develop additional treatment measures, such as data recovery, consistent with State CEQA Guidelines Section 15126.4(b)(3)(C–D).

To address this potential impact on unanticipated archaeological resources from construction of PG&E project components, a WEAP would be developed to train construction personnel on the recognition of potential cultural resources (e.g., archaeological resources) during construction, in accordance with PG&E's CM CUL-1. The WEAP would provide construction personnel with instruction on compliance with CMs and mitigation measures developed after pre-construction surveys. Pursuant to CM CUL-2, any potential archeological resources sites would be marked with flagging tape, safety fencing, and/or signs designating them as ESAs to ensure that PG&E construction crews and heavy equipment would not intrude on these sites during construction. At the discretion of the PG&E CRS, monitoring may be done in lieu of or in addition to flagging. PG&E CM CUL-3 would also be implemented to ensure

that construction activities would temporarily stop within 50 feet of any unanticipated archaeological resources discoveries until the CRS can assess the significance of the find.

Significance before Mitigation

While implementation of LSPGC APM CUL-2 would reduce impacts on archaeological resources by requiring a cultural survey of the LSPGC project alignment areas that have not been surveyed and by providing procedures in case of discoveries, the APM covers only the LSPGC components. There is potential for archaeological resources to occur in previously unsurveyed areas covered by PG&E project components. In addition, APMs CUL-2 and CUL-3 and CMs CUL-2 and CUL-3 lack clarity regarding the treatment and preservation of resources.

If archaeological resources exist within the unsurveyed areas of the project alignment, construction of LSPGC and PG&E project components could have a potential impact on archaeological resources. Conservatively, this analysis assumes that any archaeological resource encountered in unsurveyed areas is a historical resource as defined by State CEQA Guidelines Section 15064.5(a). If such a resource exists within the unsurveyed areas of the project alignment, construction of proposed project components could damage, destroy, or otherwise cause an adverse substantial change to its significance. Therefore, this impact would be significant without mitigation.

Construction Measures and Mitigation Measures

Construction Measure CR-C [PG&E] / Mitigation Measure CR-3 [LSPGC]: Conduct Archaeological Resources Surveys and Avoid Archaeological Resources

The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APMs CUL-2 and CUL-3 and PG&E CMs CUL-2 and CUL-3, as presented in the PEA, for archaeological resources:

Prior to the start of construction, a qualified archeologist who meets the U.S. Secretary of the Interior Professional Qualifications Standards for Archaeology and approved by the CPUC shall perform archeological resources surveys for any portion of the project alignment area not yet surveyed (e.g., private properties with access restrictions) within PG&E or LSPGC project component areas. PG&E and LSPGC shall be responsible for ensuring that archeological resources surveys are conducted throughout all portions of their respective project component areas. For the purposes of this mitigation measure, all archaeological resources discovered during surveys shall be assumed to be unique archaeological resources or historical resources as defined by State CEQA Guidelines Section 15064.5 and will be recorded by a qualified archaeologist on a California Department of Parks and Recreation DPR 523 primary form or equivalent documentation.

Each such resource will be indicated, such as via a GIS device, through environmentally sensitive areas (ESA) mapping, with flagging tape, safety fencing, and/or signage designating it as an Environmentally Sensitive Area to ensure that PG&E or LSPGC construction crews and heavy equipment will not intrude on these sites during construction.

Mapping or GIS marking will be preferred in locations where there is a higher risk of site looting (e.g., near public roads, on land where the owner appears to be an artifact collector). At the discretion of PG&E or LSPGC, monitoring may be done in lieu of or in addition to marking.

If it is determined that the project, as currently designed, cannot avoid impacts on one or more of the sites, then PG&E or LSPGC (as applicable) shall redesign the project so that the archaeological sites will be completely avoided.

Construction Measure CR-D [PG&E] / Mitigation Measure CR-4 [LSPGC]: For All Ground-Disturbing Construction Activities, Halt Ground Disturbance upon Discovery of Subsurface Archaeological Features

The following measure shall apply for LSPGC and PG&E project components and shall supersede and replace LSPGC APMs CUL-2 and CUL-3 and PG&E CMs CUL-2 and CUL-3, as presented in the PEA, for archaeological resources:

In the event that any precontact or historic era subsurface archaeological features or deposits are discovered during construction, including midden (typically characterized by locally darkened soils containing artifacts or surrounding bedrock milling features), all ground-disturbing activity within 50 feet of the discovery shall be halted by construction personnel, and a qualified professional archaeologist who meets the U.S. Secretary of the Interior Professional Qualifications Standards for Archaeology and has been approved by the CPUC shall be retained to assess the

significance of the find within 30 days. Assessment methods will depend on the nature of the resource but may include, but are not limited to, archival research, archaeological testing, and further recording. If the qualified archaeologist determines the archaeological material to be Native American in nature, LSPGC or PG&E shall contact the CPUC to identify the appropriate Native American tribe(s). The tribe(s) shall be contacted for their input on the preferred treatment of the find.

If the find is recommended as eligible for the California Register of Historical Resources (CRHR) by the archaeologist and determined eligible by the CPUC, the archaeologist shall develop, and PG&E or LSPGC (as applicable) shall implement appropriate procedures to protect the integrity of the resource and ensure that the resource is not subject to adverse impacts. Procedures to avoid impacts could include, but would not necessarily be limited to preservation in place (which shall be the preferred approach) and, if necessary, further research (possibly including archaeological testing) to determine the boundaries of the resource. If it is determined that the project, as currently designed, cannot avoid impacts on any newly identified site, then PG&E or LSPGC (as applicable) shall redesign the project so that the archaeological sites will be completely avoided.

Significance after Mitigation

Proposed APMs CUL-2 and CUL-3 and CMs CUL-2 and CUL-3 lack clarity regarding treatment and preservation of resources. To provide necessary clarity, Construction Measures CR-C and CR-D and Mitigation Measures CR-3 and CR-4 shall supersede and replace APMs CUL-2 and CUL-3 and CMs CUL-2 and CUL-3. With implementation of LSPGC APM CUL-1, PG&E CM CUL-1, and Construction Measures CR-C and CR-D and Mitigation Measures CR-3 and CR-4, no substantial adverse changes related to archaeological resources, as defined in PRC Section 15064.5, would occur. The APMs and CMs require WEAP training for construction personnel and the avoidance of potential archaeological resources. Construction Measures CR-C and CR-D and Mitigation Measures CR-3 and CR-4 require cultural surveys of areas that have not been surveyed and the avoidance of any identified archaeological resources, including protective measures in case of an inadvertent discovery. With implementation of mitigation, this impact would be **less than significant**.

c) Substantially disturb human remains, including those interred outside of formal cemeteries?

LSPGC and PG&E Project Components

Construction

Ground disturbance associated with construction or installation of the LSPGC and PG&E project components could result in direct impacts on human remains if present in the survey area. Human remains could be damaged or destroyed from vehicle and equipment operation, vegetation trimming and removal, soil excavation and compaction, and grading.

The archaeological pedestrian survey and records search results did not return evidence suggesting that any precontact or historic era marked or unmarked human interments are present within the project alignment area. However, the location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites. Therefore, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project alignment area and could be uncovered by project-related construction activities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in HSC Section 7050.5 and PRC Section 5097.

These statutes require that, if human remains are discovered, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the Solano County coroner shall be notified immediately. If the remains are determined by the coroner to be Native American, NAHC shall be notified within 24 hours and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the NAHC-designated Most Likely Descendant, and the landowner shall determine the ultimate treatment

and disposition of the remains and take appropriate steps to ensure that additional human interments, if present, are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Compliance with HSC Section 7050.5 and PRC Section 5097 would avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered.

Operation and Maintenance

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment) with hand tools. These activities do not have the potential to result in a substantial change to the level of significance of this impact because they are extremely minor requiring minimal to no ground disturbance.

Implementation of APMs and CMs

To address potential impacts on human remains from construction of LSPGC and project components, implementation of the WEAP prior to construction, as required by APM CUL-1, would help workers identify potential human remains during construction. In addition, if human remains are inadvertently discovered during construction activities, all work would be diverted within 50 feet of the discovery, and the CPUC would be informed immediately, as required by APM CUL-3.

To address potential impacts on human remains from construction of PG&E project components, implementation of the WEAP prior to construction, as required by CM CUL-1, would help workers identify potential human remains during construction. In addition, if human remains are inadvertently discovered during construction activities, all work would be diverted within 50 feet of the discovery, and the CPUC would be informed immediately, as required by CM CUL-3. The county coroner would then be contacted in accordance with State CEQA Guidelines Section 15064.5(d) and (e), HSC Section 7050.5, and PRC Sections 5097.98 and 5097.99. The coroner would have 2 working days to examine the remains after being notified. If the coroner determines that the remains are Native American (i.e., subject to Native American authority), the coroner would have 24 hours to notify the NAHC of the determination. Under PRC Section 5097.98, the NAHC would be required to identify the MLD, notify that person, and request that they inspect the remains and make recommendations for treatment and/or disposition. This procedure would ensure that the remains are treated in accordance with Section 15064.5(d) and (e) of the State CEQA Guidelines, HSC Section 7050.5, and PRC Sections 5097.98 and 5097.99.

Conclusion

Implementation of LSPGC APMs CUL-1 and CUL-3 and PG&E CMs CUL-1 and CUL-3 would require WEAP training for construction workers to identify human remains and halting construction if potential remains are discovered. Project construction would be subject to HSC Section 7050.5 and PRC Sections 5097.98 and 5097.99 related to identifying potential human remains. Therefore, with worker training and by complying with laws protecting human remains, substantial adverse changes related to human remains would not occur, and impacts on human remains as defined in PRC Section 15064.5 would be **less than significant**.

3.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>

3.6.1 Environmental Setting

ENERGY FACILITIES AND SERVICES IN THE PROJECT AREA

Electrical service is provided to Fresno County by PG&E. PG&E also provides natural gas service within the county. Within the project vicinity, PG&E transmits high-voltage electricity to existing substations where the voltage is stepped down (i.e., voltage is reduced for safe use at the residential-level while also improving the efficiency of electricity delivery) for distribution throughout the area. There are several existing substations in the project alignment area: the Panoche 230 kV, Los Banos 500 kV, and Gates 500 kV, Midway 500 kV substations, as well as the Tranquillity Switching Station and Las Aguilas Switching Station. Table 3.6-1 shows energy production sources for PG&E in Fresno County.

Table 3.6-1 PG&E 2022 Power Content Label

Energy Source	2022 Energy Source Mix
Eligible renewable	38.3%
Coal	0.0%
Large hydroelectric	7.6%
Natural gas	4.8%
Nuclear	49.3%
Other or unspecified power ¹	0.0%
Total	100%

Notes: PG&E = Pacific Gas and Electric. Numbers may not sum due to rounding.

¹ "Unspecified power" is defined as electricity from transactions that are not traceable to specific generation sources.

Source: CEC 2023a.

EXISTING ENERGY USE

Approximately 8 billion kilowatt-hours (kWh) of electricity were consumed in Fresno County in 2022, with approximately 3 billion kWh consumed for residential use and the other 5 billion kWh consumed for nonresidential uses (CEC 2023b). Diesel and regular unleaded gasoline are used within Fresno County mainly for vehicular transportation, including passenger cars and heavy-duty diesel trucks. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (CEC 2023a).

ENERGY CONSERVATION

PG&E sponsors several energy conservation programs that include education, solar energy incentives, electric vehicles (EVs), the fluorescent lighting business program, and a weatherization program for low-income families. These services are intended to reduce energy consumption in homes through the replacement of inefficient appliances and minor housing repairs, making homes more energy efficient. Consumers also receive educational materials that provide energy-saving tips and information.

3.6.2 Regulatory Setting

Energy conservation is required by many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [EPA's] EnergyStar program) and transportation standards (e.g., fuel efficiency). At the state level, Title 24 of the California Code of Regulations (CCR) sets forth energy standards for buildings. Furthermore, the state provides rebates or tax credits for the installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple areas. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

FEDERAL

Energy Policy and Conservation Act, and IE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the country. The EPA calculates a CAFE value for each manufacturer based on the city and highway fuel-economy test results and vehicle sales, and the DOT is authorized to assess penalties for noncompliance based on information generated under the CAFE program.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce the United States' dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Act increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard. The Final Renewable Fuels Standards for 2024 and 2025 requires fuel producers to use at least 32 billion gallons of biofuel in 2024 and 34 billion gallons in 2025 (40 CFR Parts 80 and 1090).

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

STATE

State of California Energy Action Plan

The California Energy Commission (CEC) is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 *Energy Action Plan* (2008 update), which 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 assisting public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouraging urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required the CEC to “conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state’s economy, and protect public health and safety” (PRC Section 25301[a]). This work culminated in the preparation of the first Integrated Energy Policy Report (IEPR).

The CEC adopts an IEPR every 2 years and an update every other year. The 2023 IEPR, which is the most recent IEPR, was adopted February 2024. The 2023 IEPR provides a summary of priority energy issues currently facing the state and outlines strategies and recommendations to further the state’s goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the state’s energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to accelerate the achievement of statewide energy policy goals; and issues facing California’s nuclear power plants (CEC 2024).

California Renewables Portfolio Standard

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB 100 of 2018 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 52 percent of their electricity from renewables by December 31, 2027; 60 percent by December 31, 2030; and 100 percent carbon-free electricity by December 31, 2045. On September 16, 2022, SB 1020 was signed into law. This bill supersedes the goals of SB 100 by requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035; 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040; 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045; and 100 percent of electricity procured to serve all state agencies by December 31, 2035.

Assembly Bill 32, Senate Bill 32, and Climate Change Scoping Plan and Update

In December 2008, the California Air Resources Board (CARB) adopted its *Climate Change Scoping Plan*, which contains the main strategies for achieving a reduction of approximately 118 million metric tons of carbon dioxide equivalent emissions (MMTCO₂e), or approximately 21.7 percent from the state’s projected 2020 emission level of 545 MMTCO₂e under a business-as-usual scenario (this is a reduction of 47 MMTCO₂e, or almost 10 percent, below 2008 emissions). In May 2014, CARB released and adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching the goals of Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, and to evaluate the progress made between 2000 and 2012 (CARB 2014). Since the writing of the update, California met the near-term 2020 greenhouse gas (GHG) emission limit.

In August 2016, SB 32 and AB 197, which serve to extend California’s GHG reduction programs beyond 2020, were signed into law. SB 32 amended the Health and Safety Code to include Section 38566, which authorizes CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by December 31, 2030. SB 32 codified the 2030 target established by California Executive Order (EO) B-30-15, which is the next interim step in the state’s efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of reducing GHG emissions to at least 80 percent below 1990 emission levels by 2050. Achievement of these goals will have the co-benefit of reducing California’s dependency on fossil fuels and making land use development and transportation systems more energy efficient.

California's 2017 Climate Change Scoping Plan, prepared by CARB, outlined the main strategies California will implement to achieve the legislated GHG emission target for 2030. It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste).

On September 16, 2022, the state legislature passed AB 1279, which codified stringent emissions targets for achieving carbon neutrality and an 85 percent reduction below 1990 emissions levels by 2045. CARB released the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on November 16, 2022, also as directed by AB 1279 (CARB 2022). The 2022 Scoping Plan traces the pathway for the state to achieve its carbon neutrality and 85 percent reduction in 1990 emissions goals by 2045. CARB adopted the 2022 Scoping Plan on December 16, 2022.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits.

Fresno Multi-Jurisdictional 2015-2023 Housing Element

The Fresno Multi-Jurisdictional 2015-2023 Housing Element contains goals and policies for energy conservation and sustainable development; however, there are no goals or policies relevant to the project.

3.6.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CMs) that would apply to the PG&E components of the project. The project includes APMs and CMs that are meant to achieve GHG emissions reductions by reducing fuel consumption. Therefore, the following APMs and CMs would relate to energy:

LSPGC APMs

- ▶ **APM GHG-1: Greenhouse Gas Emissions Reduction During Construction.** The following measures will be implemented during construction to minimize GHG emissions:
 - If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site.
 - On-road and off-road vehicle tire pressures will be inflated to manufacturer specifications; tires will be checked and reinflated at regular intervals.
 - Line power, instead of diesel generators, will be used at construction sites where feasible.
 - Construction equipment will be maintained per the manufacturer's specifications.

PG&E CMs

- ▶ **CM GHG-1: Greenhouse Gas Emissions Reduction During Construction.** The following actions will be taken, as feasible, to minimize greenhouse gas emissions:
 - Encourage construction workers to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the project will depend upon the proximity of carpool facilities to the area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the project's construction schedule.
 - Minimize unnecessary construction vehicle idling time for on-road and off-road vehicles. The ability to limit construction vehicle idling time will depend on the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The project will apply a "common sense" approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.
 - Maintain construction equipment in proper working conditions in accordance with PG&E standards.
 - Minimize construction equipment exhaust by using low-emission or electric construction equipment, where feasible. Portable diesel fueled construction equipment with engines 50 hp or larger and manufactured in 2000 or later will be registered under the CARB Statewide Portable Equipment Registration Program.
 - Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available.

3.6.4 Discussion

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

LSPGC and PG&E Project Components

Construction and Decommissioning

Energy would be consumed during the construction phase and future decommissioning of the LSPGC and PG&E portions of the project through the use of heavy-duty construction equipment, from the transportation and use of construction materials, and for worker commutes. As shown in Table 3.6-2, an estimated 127,954 gallons of gasoline, 450,788 gallons of diesel, and 287,408 gallons of jet fuel would be consumed during construction of the project, accounting for both on-site equipment use and off-site vehicle travel.

This short-term energy expenditure required to construct the project would be nonrecoverable. The energy needs for construction and decommissioning of the project would be primarily met through use of fuel for transportation of workers and materials and operation of equipment, and would not require additional capacity or increase peak- or base-period demands for electricity. In addition, construction-related fuel consumption would ultimately serve the purpose of improving the state's electric grid and providing reliable power.

Table 3.6-2 Summary of Estimated Fuel Consumption During LSPGC and PG&E Construction

Vehicle Type	Gasoline Consumption (gallons)	Diesel Consumption (gallons)	Jet Fuel Consumption (gallons)
Construction			
Worker vehicles	98,059	0	0
Construction vehicles	29,895	120,269	0
Construction equipment	0	330,519	0
Helicopter and support	0	0	287,408
Construction total	127,954	450,788	287,408
Operation and Maintenance			
Construction equipment	0	235,512	0

Source: Modeling performed by Insignia Environmental in 2024.

Operation and Maintenance

The proposed Manning Substation would be operated remotely from LSPGC's control center in Austin, Texas. The substation would also be monitored by the California Independent System Operator's (CAISO's) control center in Folsom, California, and CAISO would have operational control of the facility with authority to direct LSPGC's control center. LSPGC would regularly inspect, maintain, and repair the project substation facilities and access roads following completion of project construction. PG&E's facilities are currently unstaffed. During operation, these facilities would continue to be unstaffed and would be operated and monitored remotely from PG&E's control center. Proposed PG&E transmission lines would be maintained as part of PG&E's existing maintenance in the project area. In general, quarterly inspections would be performed on the Manning Substation and PG&E's existing substations and switching stations to inspect each required piece of equipment in accordance with manufacturer recommendations. Routine maintenance of the LSPGC 230 kV transmission line is expected to require approximately one trip per year by crews composed of one to four people.

Maintenance activities would involve the use of off-site construction equipment and on-road vehicles for activities such as line inspection, line maintenance, and substation maintenance. Table 3.6-2 shows that estimated annual fuel consumption for operation and maintenance activities would be 235,512 gallons. Fuel consumed during operation would be minimal and used for the purpose of maintaining critical electrical infrastructure equipment. Therefore, construction and operation of the project would not result in an inefficient, wasteful, or unnecessary consumption of energy resources.

Implementation of APMs and CMs

While APM GHG-1 and CM GHG-1 are meant to reduce GHG emissions from LSPGC and PG&E construction activities, they would also serve the purpose of reducing fossil fuel consumption. In regard to energy, APM GHG-1 would conserve energy from LSPGC project components by requiring that construction workers be encouraged to carpool to the job site (if suitable park-and-ride facilities are available in the project vicinity), vehicles and equipment be properly maintained, and line power be used in lieu of diesel generators when feasible. PG&E CM GHG-1 would also require that construction workers be encouraged to carpool to the job site (if suitable park-and-ride facilities are available in the project vicinity), that vehicles and equipment be properly maintained, and that unnecessary construction vehicle idling time for on-road and off-road vehicles be minimized so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law. Construction practices, such as those identified in APM GHG-1 and CM GHG-1 to reduce GHG emissions through promoting carpooling and recycling, would further reduce the potential for unnecessary consumption of fuel during construction.

Conclusion

As stated above, construction- and decommissioning-related fuel consumption would serve the purpose of improving the state's electric grid and providing reliable power, and fuel consumed during operation would be used for the purpose of maintaining critical electrical infrastructure equipment. Construction- and decommissioning-related energy consumption would be temporary and would cease upon completion of construction and future

decommissioning, whereas operation of the project would require some fuel use because operational activities would occur infrequently and would typically only require the use of on-road trucks. Implementation of APM GHG-1 and CM GHG-1 during construction of the project would ensure that only the necessary amount of fuel used for construction equipment is consumed. Therefore, construction, decommissioning, operation, and maintenance of the project would not result in inefficient, wasteful, or unnecessary consumption of energy resources. This impact would be **less than significant**.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

LSPGC and PG&E Project Components

Implementation of the project would align with the goal of the 2022 Scoping Plan to expand the state's electrical grid to meet increasing energy demand while prioritizing reliability. The proposed project was identified by CAISO to address electrical reliability and capacity issues in the Fresno area and to allow advancement of renewable energy generation in the San Joaquin area (CAISO 2022).

The proposed project facilities would more efficiently transmit energy and as stated above, would improve the durability and reliability of the state's electric grid. These improvements would increase the deliverability of renewable power by building and operating a facility that would help keep transmission voltages within specified parameters, reduce transmission losses, increase reactive margin for the system bus, increase transmission capacity, provide a higher transient stability limit, increase damping of minor disturbances, and provide greater voltage control and stability. The project would also be designed and constructed in conformance with LSPGC's standards, the National Electric Safety Code, and other applicable national and state codes and regulations while contributing toward CAISO's effort to meet applicable Reliability Standards and Criteria developed by the North American Electric Reliability Corporation, the Western Electricity Coordinating Council, and CAISO. Furthermore, Appendix D, "Local Actions," of the 2022 Scoping Plan directs local agencies to reduce GHG emissions in several key sectors, including transportation electrification and building decarbonization. By increasing load capacity and reliability, the project would be supporting energy-related GHG reductions in these key areas.

As stated above, the project would improve the reliability and accessibility of electricity in Fresno County. This would be consistent with the CEC's goals in the IEPR to improve the reliability of the electrical grid. Specifically, the project would reduce Fresno County's susceptibility to power losses due to a transmission line failure, overload, or similar event.

While the project itself would not directly reduce fossil fuel reliance, the project would facilitate deliverability of load from existing and proposed renewable generation projects (primarily solar projects) in the Fresno/San Joaquin area. As such, the project would not impede progress toward implementation of energy efficiency programs. By improving the delivery efficiency of energy and improving grid reliability, the project would support the goals of the 2022 Scoping Plan, especially those in Appendix D "Local Actions," as well as the CEC's goals within the IEPR.

Conclusion

The project would align with the goals of the 2022 Scoping Plan and the IEPR to improve grid reliability and resilience by increasing grid capacity to accommodate additional energy demand. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

3.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 California Geological Survey 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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input 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 soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), 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 type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

REGIONAL AND LOCAL GEOLOGY

The following regional and local geologic setting information is summarized from the *Paleontological Resource Technical Memorandum for the Manning 500/230KV Substation Project, Fresno County, California* (Paleontological Resource Technical Memo), prepared by LSPGC and reviewed by Ascent (Chronicle Heritage 2024). The Paleontological Resource Technical Memo is provided as Appendix F.

The project alignment area is within the southern portion of the Great Valley geomorphic province, an approximately 50-mile-wide by 400-mile-long alluvial plain in the central part of California that has accumulated sediment since the Jurassic Period (201 to 145 million years ago). The present-day Great Valley was once covered by marine waters, when marine and nonmarine shale, sandstone, and conglomerate of the Cretaceous Period (145 to 66 million years ago) Central Valley Sequence was deposited. When the Great Valley region began subsiding in the Paleocene Epoch (66 to 56 million years ago), marine continental shelf sediment was deposited above the Great Valley Sequence. By the beginning of the Pliocene Epoch (5.3 to 2.6 million years ago), most of the marine waters in the Great Valley were drained, and an orogenic (i.e., mountain-building) episode occurred in the vicinity of the present-day Coast Ranges, resulting in extensive deposition of terrestrial material, including alluvial fans and fluvial sediments in the Great Valley. The present-day Great Valley is primarily influenced by two rivers. The northern portion of the valley (i.e., the Sacramento Valley) is drained by the Sacramento River, while the southern portion of the valley (i.e., the San Joaquin Valley) is drained by the San Joaquin River. The depth of the sedimentary deposits, combined with associated orogenic uplift and faulting, has produced extensive oil fields, particularly in the southernmost area of the San Joaquin Valley and along anticlinal uplifts on its southwestern margin.

Locally, the project alignment area is situated immediately east of the Diablo Range, a mountain range in California's Coast Ranges that extends approximately 200 miles from Contra Costa County at its northern end to Monterey County in the south, and generally consists of rolling hills and grasslands. The project alignment area is situated on sedimentary basin deposits that have been shed off the uplifted and tilted Tumey Hills and Panoche Hills to the southwest. The Cenozoic deposits in the valley are diverse, recording both local tectonic activity and global sea-level change.

GEOLOGIC HAZARDS

Typical geologic hazards include earthquakes, surface-fault rupture, ground shaking, liquefaction, and lateral spreading. Each of these potential hazards is discussed below, as relevant to the project.

Faulting and Seismic Hazards

Most earthquakes originate along fault lines. A fault is a fracture in the earth's crust along which rocks on one side are displaced relative to those on the other side due to shear and compressive crustal stresses. Most faults are the result of repeated displacement that may have taken place suddenly or by slow creep (Bryant and Hart 2007). The State of California has a classification system that designates faults as either active, potentially active, or inactive, depending on how recently displacement has occurred along them. Faults that show evidence of movement within the last 11,000 years (the Holocene geologic period) are considered active, and faults that have moved between 11,000 and 1.6 million years ago (comprising the later Pleistocene geologic period) are considered potentially active.

There are two faults mapped within 2 miles of the project alignment area. The Great Valley thrust fault system is a north-south-trending, seismically active blind thrust fault and fold belt that marks the boundary between the Coast Ranges and the Great Valley, consisting of 14 different sections. The project alignment area crosses the Great Valley thrust fault system at the fault's 11th section (LSPGC 2024). In addition, an unnamed fault is located approximately 2 miles southwest of the project alignment area; however, no additional information is available for this fault.

Both faults are considered Quaternary faults, which are faults that have been recognized at the surface and have moved in the past 1.6 million years. According to the California Department of Conservation's (DOC's) Map Sheet 48: *Earthquake Shaking Potential for California*, the project alignment area is within a region that will experience lower levels of shaking during earthquakes in comparison to other regions of California (DOC 2016).

Surface Fault Rupture

Surface rupture is the surface expression of movement along a fault. Structures built over an active fault can be torn apart if the ground ruptures. The potential for surface rupture is based on the concepts of recency and recurrence. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Act (see the "Regulatory Setting" section, below) was created to prohibit the location of structures designed for human occupancy across or within 50 feet of an active fault, thereby reducing the loss of life and property from an earthquake. The project alignment area is not located within an Alquist-Priolo active fault zone (DOC 2024).

Landslides

Landslides involve the movement of a mass of rock, debris, or earth down a slope and can be caused by rainfall, snowmelt, changes in water level, stream erosion, changes in groundwater, earthquakes, volcanic activity, disturbance from human activities, or any combination of these factors (USGS 2024). Elevations within the project alignment area range from 200 to 800 feet, and slopes range from 0 to 15 percent. However, according to the California Geological Survey (CGS) California Earthquake Hazards Zone Application, the project alignment area is not located in a landslide hazard zone. In addition, no records of major historical landslides were found along the project alignment area (DOC 2021).

Liquefaction and Lateral Spreading

Liquefaction is a phenomenon in which loose, saturated, granular soil deposits lose a significant portion of their shear strength because of excess pore water pressure buildup. As a result, during an earthquake, these soils behave like a liquid during seismic shaking and resolidify when shaking stops. The potential for liquefaction is highest in areas with high groundwater and loose, fine, sandy soils at depths of less than 50 feet. Liquefaction may also lead to lateral spreading. Lateral spreading (also known as expansion) is the horizontal movement or spreading of soil toward an "open face" such as a streambank, the open side of fill embankments, or the sides of levees. It often occurs in response to liquefaction of soils in an adjacent area. The potential for failure from lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high.

According to the CGS California Earthquake Hazards Zone Application, the project alignment area is not located in a liquefaction zone (CGS 2021). Accordingly, the risk of lateral spreading within the project alignment area would be low.

Groundwater

The project is within the Westside Subbasin of the San Joaquin Groundwater Basin. The Westside Subbasin is located between the Coast Ranges to the west and the San Joaquin River drainage and Fresno Slough to the east. The subbasin is bordered on the southwest by the Pleasant Valley Subbasin, on the west by Tertiary marine sediments of the Coast Ranges, on the north and northeast by the Delta-Mendota Subbasin, and on the east and southeast by the Kings and Tulare Lake Subbasins.

According to the most recent U.S. Geological Survey (USGS) data, the depth to the water table is approximately 355 feet; the depth extends to approximately 1,358 feet (USGS 2024). However, no documented groundwater wells are located within the project alignment area (DWR 2023). The closest groundwater well is approximately 0.3 miles east of PG&E's existing Panoche Substation. Documentation of groundwater depth at the well site indicated that the depth to the groundwater table is approximately 220 feet.

Subsidence

Land subsidence is the gradual settling or sinking of an area with very little horizontal motion. Subsidence can be induced by both natural and human phenomena. Natural phenomena include the shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, and gas from underground reservoirs; collapse of underground mines; drainage of wetlands; and soil compaction. The project alignment area has a history of subsidence resulting from excessive groundwater pumping, with the land surface falling between 5 and 20 feet in the project alignment area from 1949 to 2005 (DWR 2023). More recently, between the years 2015 and 2023, the land surface in areas of the project alignment area subsided up to 1 foot (DWR 2023).

GEOLOGIC UNITS

As detailed in the Paleontological Resource Technical Memo prepared for the project, the project alignment area is underlain by younger alluvium (Qya) (Quaternary) and Tulare Formation (QTnt) (Pliocene-Pleistocene).

Younger alluvium (Qya) within the project alignment area consists of diverse unconsolidated deposits ranging in size from clay to boulder deposited in the Holocene Epoch (11,700 years ago to present). Most of the project alignment

area is located on the flat-lying younger alluvium in the valley floor, which was deposited in various fluvial, lacustrine, alluvial, and eolian processes.

The Tulare Formation was defined at the Kettleman Hills near the old shoreline of Tulare Lake. This geologic unit is approximately 1,700–3,500 feet thick and is intermittently exposed from the eastern flank of the Diablo Range to the center of the Great Valley. In the vicinity of the project alignment area, the Tulare Formation consists of clay, silt, and gravel at the foothills of the Tumey Hills and Panoche Hills. The Tulare Formation is mapped within the westernmost portion of the project alignment.

SOILS

Soils within the project alignment area were mapped by the Natural Resources Conservation Service (NRCS) Web Soil Survey. The soils within the project alignment area, as well as their properties, including hydrologic group, wind erodibility, and slope percent, are presented in Table 3.7-1.

Table 3.7-1 Mapped Soil Units and Soil Properties for Soils within Project Area Alignment

Map Unit Name	Hydrologic Unit	Wind Erodibility Index	Soil Erodibility Factor (K)	Slope Percent	Stability Concerns
Excelsior sandy loam	A	86	0.34	0 to 2	Moderate erosion potential, subsidence potential
Cerini clay loam, subsided	C	86	0.34	0 to 5	Moderate erosion potential, moderate runoff potential, subsidence potential
Guijarral sandy loam	A	86	0.26	2 to 5	Moderate erosion potential, subsidence potential
Panoche clay loam, subsided	B	86	0.34	0 to 5	Moderate erosion potential, moderate runoff potential, subsidence potential
Panoche clay loam	C	86	0.34	0 to 2	Moderate erosion potential, moderate runoff potential, subsidence potential
Ciervo, wet-Ciervo complex, saline-sodic	D	86	0.29	0 to 1	Moderate erosion potential, high runoff potential, subsidence potential
Ciervo clay, saline-sodic, wet	D	86	0.42	0 to 1	Moderate erosion potential, high runoff potential, subsidence potential
Calflax clay loam, saline-sodic, wet	C	86	0.25	0 to 1	Moderate erosion potential, moderate runoff potential, subsidence potential
Milham-Guijarral association	C	86	0.26	5 to 15	Moderate erosion potential, subsidence potential

Source: LSPGC 2024.

The hydrologic group classification is a measure of runoff potential determined by a soils infiltration rate, which is the rate at which water enters the soil at the surface (NRCS 2002). Soils are classified into Group A, B, C, or D. Group A soils have a high infiltration rate and the lowest runoff potential and typically consist of deep, well-drained to excessively drained sands or gravels. Group B soils have a moderate infiltration rate and consist of deep, moderately well or well-drained soils with moderately fine to moderately coarse textures. Group C soils have a slow infiltration rate and consist of soils with a layer that impedes the downward movement of water, or soils with moderately fine or fine textures. Group D soils have a very slow infiltration rate and consist of clayey soils with high swelling potential, soils with a high permanent water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious materials.

As defined by the State Water Resources Control Board (SWRCB), the soil-erodibility factor (K) represents the susceptibility of soil or surface material to erosion, the potential for sediment transport, and the amount and rate of runoff given a particular rainfall input, as measured under a standard condition (SWRCB 2023). The higher the K value, the more susceptible a soil type is to erosion. All soils within the project alignment area have a moderate K

value between 0.25 and 0.45, which means the soils are moderately susceptible to particle detachment and produce runoff at moderate rates.

According to the U.S. Department of Agriculture (USDA), soil erodibility by wind is directly related to the percentage of dry non-erodible surface soil aggregates larger than 0.84 millimeters in diameter (NRCS 2002). The soil erodibility index ranges from 0 to 310, with higher values having greater susceptibility to wind erosion. Soils consisting of very fine, dry sand have the highest wind erodibility index, and soils consisting of wet or coarse fragments have the lowest wind erodibility index. All soils found within the project alignment area have a wind erodibility index of 86, which means the soils in the area are moderately susceptible to wind erosion.

UNIQUE PALEONTOLOGICAL RESOURCES OR GEOLOGIC FEATURES

The following is summarized from the Paleontological Resource Technical Memo prepared for the project (Chronicle Heritage 2024). As part of Paleontological Resource Technical Memo, a fossil locality records search was conducted by the Natural History Museum of Los Angeles County (NHMLAC). The records search was supplemented by a review of existing geologic maps and primary literature regarding fossiliferous geologic units within the project vicinity and region. The technical memorandum was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP) (2010).

As described above, the project alignment area is underlain by younger alluvium (Qya) (Quaternary) and Tulare Formation (QTnt) (Pliocene-Pleistocene). Younger alluvium in the project alignment area consists of diverse unconsolidated deposits ranging in size from clay to boulder deposited in the Holocene Epoch (11,700 years ago to present). Most of the project alignment area is located on the flat-lying younger alluvium in the valley floor, which was deposited in various fluvial, lacustrine, alluvial, and eolian processes. Holocene deposits are typically too young to have accumulated or preserved significant biological material but may overlie older Pleistocene deposits with significant paleontological resources. Pleistocene deposits in Fresno County have produced remains of mammoth, camel, coyote, deer, horse, bison, elk, rabbit, fox, mole, badger, rodent, aquatic and terrestrial bird, snake, turtle, lizard, plant, and multiple freshwater invertebrates. Younger alluvium has a low paleontological resource sensitivity in the Holocene-age sedimentary deposits; however, sensitivity could increase if older Pleistocene deposits are encountered at depth.

In addition, the Tulare Formation consists of westward-thickening alluvial fan conglomerate, fluvial sandstone, and interbedded lacustrine siltstone and clay deposits that drained from the Coast Ranges during the Pliocene and Pleistocene epochs. In the project alignment area, the Tulare Formation consists of clay, silt, and gravel at the foothills of the BLM's Tumey Hills recreation area and the Panoche Hills. Because the Tulare Formation in the project alignment area is in the foothills of the Diablo Range, it may be obscured by up to 60 inches of soil development. Elsewhere in Fresno County, the Tulare Formation has produced remains of mammoth, bony fish, and freshwater invertebrates.

The NHMLAC records search did not identify any fossil localities within the project alignment area, but did identify two fossil localities in similar deposits within 15 miles of the project alignment area. These fossil localities were both found within the Tulare Formation, approximately 7 miles southeast and 15 miles northwest of the project alignment area, and consist of invertebrates (uncatalogued), short-faced bear, horse, and camelid. The fossil localities are located in sedimentary deposits either at the surface or at depth. No localities were identified within the younger alluvium. Searches of online databases and other literature did not produce any additional localities within 3 miles of the project alignment area.

3.7.2 Regulatory Setting

FEDERAL

National Earthquake Hazards Reduction Act

In October 1977, the Earthquake Hazards Reduction Act was enacted to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of the NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities.

Antiquities Act of 1906

The Antiquities Act of 1906 (16 U.S. Code [USC] Sections 431–433) was enacted with the primary goal of protecting cultural resources in the United States. This act explicitly prohibits appropriation, excavation, injury, and destruction of any historic or prehistoric ruin or monument, or any “object of antiquity” located on lands owned or controlled by the federal government, without prior permission of the secretary of the federal department that has jurisdiction over the site. The act also establishes criminal penalties, including fines and imprisonment, for these acts. The Antiquities Act contains a requirement for studies by qualified experts in the subject matter and contains precise stipulations regarding the management/curation of collected materials. Although the Antiquities Act itself and its implementing regulation (43 CFR Section 3) do not specifically mention paleontological resources, “objects of antiquity” has been interpreted to include paleontological resources by the National Park Service (NPS), the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and other federal agencies.

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (PRC Sections 2621–2630) is intended to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors and by prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as “active” and “inactive”, and establishes a process for reviewing building proposals in Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones is strictly regulated if they are “sufficiently active” and “well-defined.” A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as within the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

The intention of the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The act’s provisions are similar in concept to those of the Alquist-Priolo Act: The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards,

and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development.

California Building Standards Code

The California Building Standards Code (CBC) (California Code of Regulations, Title 24) is based on the International Building Code. The CBC has been modified from the International Building Code for California conditions, with more detailed and stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Chapter 18A regulates construction on unstable soils, such as expansive soils and areas subject to liquefaction. Appendix J of the CBC regulates grading activities, including drainage and erosion control. The CBC contains a provision that requires completion of a geotechnical investigation, including a preliminary soil report to identify “the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects” (CBC Chapter 18 Section 1803.1.1.1). The geotechnical investigation must include, among other requirements, a record of the soil profile as well as recommendations for foundation type and design criteria that address issues such as (but not limited to) bearing capacity of soils, provisions to mitigate the effects of expansive soils, liquefaction, settlement, and varying soil strength. CBC Chapter 18 Section 1803.1.1.3 states that if a building department, or other appropriate enforcement agency, determines that recommended action(s) presented in the geotechnical investigations are likely to prevent structural damage, the approved recommended action(s) must be made a condition to the building permit.

National Pollutant Discharge Elimination System Construction General Permit

The National Pollutant Discharge Elimination System (NPDES) Program is a federal program that has been delegated to the State of California for implementation through the State Water Resources Control Board and the nine Regional Water Quality Control Boards. In California, NPDES permits are also referred to as waste discharge requirements (WDRs) that regulate discharges to waters of the United States.

Projects that disturb 1 or more acres of soil or projects that disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (Construction General Permit). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development of a stormwater pollution prevention plan (SWPPP) by a certified qualified SWPPP developer. A SWPPP identifies the measures required to minimize the potential discharge of pollutants from the construction site, including sediment and erosion. Typical measures to reduce erosion include filter fences, fiber rolls, erosion control blankets, mulch (such as wood chips), temporary drainage swales, settling basins, routine application of water to disturbed land areas, covering of stockpiles with plastic or fabric sheeting, and other erosion-control methods.

California Public Resources Code Sections 5097.5 and 30244 and California Penal Code Section 622.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands. PRC Section 30244 requires reasonable mitigation for impacts to paleontological resources that occur as a result of development on public lands. Further, California Penal Code Section 622.5 sets the penalties for the unlawful damage to or removal of paleontological resources.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. However, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Health and Safety Element and Open Space and Conservation Element of the Fresno County General Plan contain policies and programs that aim to protect and preserve the paleontological and geological resources in the county (Fresno County 2024). The General Plan contains the following policies that are relevant to the protection of geological and paleontological resources:

- ▶ **Policy OS-J.4: Cultural Resources Protection and Mitigation.** The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archeological, tribal, paleontological, and cultural sites and resources. For projects requiring ground disturbance and located within a high or moderate cultural sensitivity areas, a cultural resources technical report may be warranted, including accurate archival research and site surveys conducted by qualified cultural resources practitioners. The need to prepare such studies shall be determined based on the tribal consultation process and initial outreach to local or state information centers.
- ▶ **Policy HS-D.1: Geologic Investigations and Knowledge.** The County shall continue to support scientific geologic investigations that refine, enlarge, and improve the body of knowledge on active fault zones, unstable areas, severe ground shaking, avalanche potential, and other hazardous geologic conditions in Fresno County.
- ▶ **Policy HS-D.2: Geologic Hazard Mitigation Planning.** The County shall ensure that the General Plan and/or County Ordinance Code is revised, as necessary, to incorporate geologic hazard areas formally designated by the State Geologist (e.g., Earthquake Fault Zones and Seismic Hazard Zones). Development in such areas, including public infrastructure projects, shall not be allowed until compliance with the investigation and mitigation requirements established by the State Geologist can be demonstrated.
- ▶ **Policy HS-D.3: Soils and Geologic-Seismic Analysis.** The County shall require that a soils engineering and geologic-seismic analysis be prepared by a California-registered engineer or engineering geologist prior to permitting development, including public infrastructure projects, in areas prone to geologic or seismic hazards (i.e., fault rupture, ground shaking, lateral spreading, lurch cracking, fault creep, liquefaction, subsidence, settlement, landslides, mudslides, unstable slopes, or avalanche).
- ▶ **Policy HS-D.4: Soils and Geologic-seismic Structure Design.** The County shall require all proposed structures, additions to structures, utilities, or public facilities situated within areas subject to geologic-seismic hazards as identified in the soils engineering and geologic-seismic analysis to be sited, designed, and constructed in accordance with applicable provisions of the California Building Code (Title 24 of the California Code of Regulations) and other relevant professional standards to minimize or prevent damage or loss and to minimize the risk to public safety.
- ▶ **Policy HS-D.5: Alquist-Priolo Earthquake Fault Act.** Pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code, Chapter 7.5), the County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones unless the specific provisions of the Act and Title 14 of the California Code of Regulations have been satisfied.

- ▶ **Policy HS-D.7: Soils Report.** The County shall require a soils report by a California-registered engineer or engineering geologist for any proposed development, including public infrastructure projects, that requires a County permit and is located in an area containing soils with high “expansive” or “shrink-swell” properties. Development in such areas shall be prohibited unless suitable design and construction measures are incorporated to reduce the potential risks associated with these conditions.
- ▶ **Policy HS-D.8: Minimize Soil Erosion.** The County shall seek to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where feasible, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.

3.7.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CMs) that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to geology and soils.

LSPGC APMs

- ▶ **APM AIR-2: Dust Control.** Measures to control fugitive dust emissions will be implemented during construction. These measures will be included in a Fugitive Dust Control Plan that will be prepared in accordance with SJVAPCD requirements. The measures will be implemented as needed to control dust emissions. These measures will include, but may not be limited to, the following:
 - Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance.
 - Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or will be covered.
 - Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material will be covered with tarps or maintain at least 6 inches of freeboard.
 - Vehicles will adhere to a speed limit of 15 mph on project-specific construction routes and within temporary work areas.
- ▶ **APM GEO-1: Geological Hazards and Disturbance to Soils.** The following measures will be implemented during construction to minimize impacts from geological hazards and disturbance to soils:
 - Keep vehicles and construction equipment within the limits of the project and in approved construction work areas to reduce disturbance to topsoil.
 - Prior to grading in temporary work areas, salvage topsoil to a depth of 6 inches or to the actual depth if shallower (as identified in a site-specific geotechnical investigation report) to avoid the 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 temporarily disturbed areas. Recontour temporarily disturbed areas following construction to match pre-construction grades. Site and manage on-site material storage in accordance with all required permits and approvals.
 - Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Dispose of removed vegetation off site at an appropriate licensed facility, or it can be chipped on site to be used as mulch during restoration.

PG&E CMs

- ▶ **CM GEN-1: Standard Construction Practices.** The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts.
 - Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
 - Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety.
 - Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable.
 - Speed limit: vehicles will not exceed a speed limit of 15 mph in the ROWs or on unpaved roads within sensitive land-cover types.
 - Restoration and erosion control: on completion of any Proposed Project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions.
 - Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or U.S. Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures.
 - Staging Area Maintenance: Work sites would be maintained in a clean and orderly State.
 - Environmentally Sensitive Areas: Biological field surveys would be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities.
 - Aquatic resources: All aquatic resources would be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas.
 - Vegetation: Vegetation and tree removal would be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements.
 - Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife.
 - Delineation of Work Areas: Work areas would be clearly delineated prior to construction commencing with fencing, staking, or flags.
- ▶ **CM AIR-2: Fugitive Dust Control.** The following actions will be taken, as applicable and feasible, to control fugitive dust during construction. SJVAPCD notifications will be made in accordance with any requirements in effect at the time of construction.
 - Applying water to disturbed areas and to storage stockpiles.
 - Applying water in sufficient quantities to prevent dust plumes during activities such as clearing and grubbing, backfilling, trenching, and other earth-moving activities.
 - Limit vehicle speed to 15 mph.
 - Load haul trucks with a freeboard (space between top of truck and load) of 6 inches or greater.
 - Cover the top of the haul truck load.
 - Clean up track-out at least daily.

- ▶ **CM GEO-1: Minimize Construction in Soft or Loose Soils.** Where soft or loose soils are encountered during project construction, several actions are available, feasible, and can be implemented to avoid, accommodate, replace, or improve such soils. Depending on site-specific conditions and permit requirements, one or more of these actions may be implemented to eliminate impacts from soft or loose soils:
 - Locating construction facilities and operations away from areas of soft and loose soil.
 - Over-excavating soft or loose soils and replacing them with engineered backfill materials.
 - Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction.
 - Installing material, such as aggregate rock, steel plates, or timber mats, over access roads.
 - Treating soft or loose soils in place with binding or cementing.
- ▶ **CM PALEO-1: Unanticipated Paleontological Discoveries.** If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with the qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery (if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and the CPUC. The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility

3.7.4 Discussion

- 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 California Geological Survey Special Publication 42.)

LSPGC and PG&E Project Components

The project alignment area is not located within an Alquist-Priolo active fault zone. However, the project alignment would cross the Great Valley thrust fault system at the fault's 11th section. In addition, an unnamed fault is located approximately 2 miles southwest of the project alignment. Both faults are considered Quaternary faults, which are faults that have been recognized at the surface and have moved in the past 1.6 million years, and thus are considered potentially active. Despite the presence of these faults, there are no components of the project that would have the potential to directly or indirectly cause surface fault rupture or exacerbate hazards associated with surface fault rupture because the project includes a new substation and transmission lines. In addition, Quaternary-aged faults are considered to have a relatively low potential for surface rupture. Therefore, construction and operation of the project would not exacerbate or otherwise cause the rupture of a known earthquake fault that could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death. This impact would be **less than significant**.

ii) Strong seismic ground shaking?

LSPGC and PG&E Project Components

As mentioned under item “i,” the project alignment area is not located within an Alquist-Priolo active fault zone. However, the project alignment would cross the Great Valley thrust fault system at the fault’s 11th section, and an unnamed fault is located approximately 2 miles southwest of the project alignment area. Both faults are considered Quaternary faults, which are faults that have been recognized at the surface and have moved in the past 1.6 million years and thus are considered potentially active. The Great Valley thrust fault section 11 has a maximum moment magnitude of 6.4 (LSPGC 2024). As such, the project is in an area that is subject to ground shaking from earthquakes generated on faults within the project vicinity. Despite the presence of these faults, the project does not include the construction of any structures intended for human occupancy that could expose people to additional strong seismic ground shaking.

In addition, all new structures associated with the project would be developed in compliance with the most current version of the CBC, which includes requirements to address seismic ground shaking. Specifically, the project would adhere to the minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Furthermore, the project does not include the construction of any habitable structures that could be exposed (including its occupants) to strong ground shaking. Lastly, the impact of the environment on a project (such as the impact of existing seismic ground shaking hazards on new project receptors) is not considered to be an impact requiring consideration under CEQA, unless the project could exacerbate an existing environmental hazard. For these reasons, the project does not include any components that would have the potential to exacerbate the effects of strong seismic ground shaking. Therefore, the project would not directly or indirectly exacerbate the risk of loss, injury, or death involving strong seismic ground shaking. Impacts would be **less than significant**.

iii) Seismic-related ground failure, including liquefaction?

LSPGC and PG&E Project Components

The project alignment is not located in a liquefaction zone (CGS 2021). Accordingly, the risk of seismic-related ground failure from lateral spreading within the project alignment area would be low. The project would not exacerbate the risk of seismic-related ground failure, including liquefaction, and there would be **no impact**.

iv) Landslides?

LSPGC and PG&E Project Components

As discussed in Section 3.7.1, elevations within the project alignment area range from 200 to 800 feet, and slopes range from 0 to 15 percent. However, according the CGS California Earthquake Hazards Zone Application, the project alignment area is not located in a landslide hazard zone. In addition, no records of major historical landslides were found in the project alignment area (DOC 2023). Therefore, the project alignment area would not be prone to seismic-induced landslides, nor would the project exacerbate landslide hazards. **No impact** would occur.

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

LSPGC and PG&E Project Components

Construction

A review of NRCS soil survey data for the project area identified that the soils in the project alignment area have moderate erosion and runoff potential (NRCS 2019). Construction of the LSPGC and PG&E project components would have the potential to result in erosion from activities such as grading and vegetation clearing. Project construction activities would include grading of the proposed substation site and driveway, as well as new access roads and staging areas in the project alignment area (see Appendix A). Structure raise areas would include minor grading as needed to provide a vegetation-free surface.

During construction, the existing network of public and private roads (paved and unpaved) would primarily be used to access the substation site, structure work areas, and staging areas. Many structure work areas would be parallel to or adjacent to agricultural or county roads. Therefore, work areas would be accessed directly from adjacent roads. In some instances, areas for structure raising would not be adjacent to roadways, and temporary access roads would be constructed. Where temporary access roads and overland access routes may also be required, minimal grading and vegetation clearing would occur. Within agricultural lands, temporary access roads and overland access are identified to minimize disruptions. The modifications to existing unpaved roadways and installation of new temporary access routes would have the potential to result in soil erosion and loss of topsoil.

For construction projects larger than 1 acre, regulatory compliance with the NPDES Construction General Permit (Order 2022-0057-DWQ) is required. The total area of temporary ground disturbance for project construction would be over 1 acre and would include the substation site, staging areas, installation clearances, and temporary access roads to the structures along the distribution lines. Therefore, construction of the project would be subject to the NPDES Construction General Permit. As part of the Construction General Permit, LSPGC and PG&E would each be required to prepare and implement a SWPPP, which requires the identification and implementation of erosion and sediment control features (including wind erosion) to reduce the project's potential for soil erosion during construction. Inspection of construction sites before and after storms is also required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary. Typical measures included in a SWPPP that address erosion and that would be implemented for this project include filter fences, fiber rolls, erosion control blankets, mulch (such as wood chips), temporary drainage swales, settling basins, routine application of water to disturbed land areas, covering of stockpiles with plastic or fabric sheeting, and other erosion-control methods. As discussed in Chapter 2, "Project Description," the best management practices (BMPs) designated in the SWPPPs would remain in place and would be maintained until new vegetation is established.

Erosion and loss of topsoil during construction of LSPGC and PG&E project components would be minimized because of the limited areas that would be graded and disturbed, the temporary nature of construction, and the relatively flat work areas. In addition, compliance with the NPDES Construction General Permit, including preparation and implementation of the SWPPPs and associated erosion and sedimentation control measures, would ensure that construction of the project would not result in substantial erosion or the loss of topsoil.

Implementation of APMs and CMs

Implementation of LSPGC APM AIR-2 and PG&E CM AIR-2 would require the use of dust control measures during construction that would minimize erosion, including watering or covering exposed surfaces that have the potential to generate dust. Implementation of APM GEO-1 would require LSPGC to avoid areas with saturated soils and loose soils to maintain soil structure, recontour temporarily disturbed areas following construction, and minimize vegetation removal and soil disturbance. CMs GEO-1 and GEN-1 would require PG&E to avoid soft and loose soils, install material over access roads, bind or cement loose soils where needed, and stabilize and revegetate areas disturbed after construction. The implementation of these APMs and CMs would further ensure that construction of the project would not result in substantial erosion or the loss of topsoil.

Operation and Maintenance

During LSPGC and PG&E operation and maintenance, runoff rates could increase from the additional area of semipermeable surfaces and impermeable surfaces created by the project components, which could result in erosion off-site. The LSPGC project components that would result in additional impervious surfaces include the proposed Manning Substation and installation of transmission line poles to support the 230 kV transmission line. The total area of new permanent impacts created by the LSPGC project components would be 3.8 acres. Overland flows onto these LSPGC project components are not expected given the relatively flat terrain. PG&E project components that would result in additional impervious surfaces include the installation of transmission line poles to support the 230 kV and 500 kV interconnections, 500 kV transposition structures, and 12 kV distribution line. The total area of new permanent impacts created by the PG&E project components would be 1.9 acres. Overland flows onto these PG&E project components are not expected given the relatively flat terrain.

To address the increase in potential runoff, the Manning Substation would include a detention basin to retain drainage from the substation site. The detention basin would reduce the potential for erosion or the loss of topsoil during operation and maintenance of the Manning Substation. Proposed erosion and runoff from LSPGC and PG&E transmission line structures would be minimal because the structures would be placed into the ground and the area around the structures would be revegetated.

Conclusion

Construction of the LSPGC and PG&E project components would have the potential to result in erosion from activities such as grading and vegetation clearing. In addition, during LSPGC and PG&E operation and maintenance, runoff rates could increase because of the additional area of semipermeable and impermeable surfaces created by the project components, which could result in erosion off-site. However, compliance with existing regulatory requirements would ensure that construction and operation of the project would not result in substantial erosion or the loss of topsoil. The implementation of APMs and CMs and project design features would further reduce any potential for erosion or the loss of topsoil. This impact would be **less than significant**.

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

As discussed above in under item "a," the project is not in an area susceptible to landslides, lateral spreading, or liquefaction and therefore would not have the potential to exacerbate any of these hazards during construction or operation and maintenance. Although the project alignment area is located in an area of historic subsidence, in the past 10 years, the area has only subsided up to 1 foot (DWR 2023). The proposed LSPGC and PG&E project components would not exacerbate subsidence conditions during construction or operation because the project would not include deep excavations for buildings, foundations on expansive soils (see item "d"), or excessive groundwater extraction. Impacts would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

LSPGC and PG&E Project Components

Construction

A review of NRCS soil survey data for the project alignment area identified expansive soils in the vicinity of the project alignment (NRCS 2019). Approximately 3 miles of the proposed LSPGC 230 kV transmission line and PG&E 230 kV Reconductoring would occur on soils identified as Ciervo clay and Ciervo soils. These soils are classified as Hydrological Group D, meaning they have a very slow infiltration rate, high swelling potential, and high permanent water table, resulting in moderate expansion potential. Other project components along the alignment area are not located on expansive soils.

Telecommunication poles would be installed to depths of approximately 10–50 feet, depending on the type of pole structure and location, which would prevent shifting as a result of soil expansion or collapse. In addition, all new structures associated with the project would be constructed in compliance with the most current version of the CBC, which includes requirements to address expansive soils. Specifically, Chapter 18 of the CBC regulates the excavation of foundations, and Chapter 18A regulates construction on unstable soils, such as expansive soils. The CBC contains a provision that requires completion of a geotechnical investigation, including a preliminary soil report to identify "the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects" (CBC Chapter 18, Section 1803.1.1.1). The geotechnical investigation must include, among other requirements, a record of the soil profile, as well as recommendations for foundation type and design criteria that address issues such as (but not limited to) bearing capacity of soils, provisions to mitigate the effects of expansive soils, liquefaction, settlement, and varying soil strength. CBC Chapter 18, Section 1803.1.1.3 states that if a building department or other appropriate enforcement agency determines that recommended actions presented in the geotechnical investigations are likely to prevent structural damage, the approved recommended actions must be made a condition to the building permit.

Therefore, compliance with the CBC would ensure that construction of the project components would not create substantial direct or indirect risks to property from being located on expansive soils.

Implementation of APMs and CMs

APM GEO-1 would address unstable soils for LSPGC project components by requiring the implementation of measures during construction to address disturbed soils. These measures would include avoiding topsoil salvage in saturated soils to maintain soil structure, retouring temporarily disturbed areas following construction to match pre-construction grades, and keeping soil disturbance to a minimum. CM GEO-1 would address unstable soils for PG&E project components by requiring the implementation of appropriate design measures where soft or loose soils are encountered during construction of PG&E facilities. These measures could include locating construction activities away from areas of soft and loose soil, overexcavating soft or loose soils and replacing them with nonexpansive engineered fill, and increasing the density and strength of soft or loose soils through mechanical vibration and compaction. The implementation of these APMs and CMs would reinforce project compliance with the CBC by avoiding, accommodating, replacing, or improving soils encountered to ensure that construction and operation of the project components would not create substantial direct or indirect risks to property from being located on expansive soils.

Operation and Maintenance

Once the project components are operational, LSPGC and PG&E operation and maintenance would not include any activities that would create substantial direct or indirect risks to property from being located on expansive soils because any potential hazards associated with expansive soils would be addressed during the design and construction phases of the project.

Conclusion

A review of NRCS soil survey data for the project area identified expansive soils along approximately 3 miles of the project alignment. Compliance with the CBC would ensure that construction of the LSPGC and PG&E project components would not create substantial direct or indirect risks to property from being located on expansive soils. Once the project components are operational, LSPGC and PG&E operation and maintenance would not include any activities that would create substantial direct or indirect risks to property from being located on expansive soils. The implementation of APM GEO-1 and CM GEO-1 as part of the proposed project would avoid, accommodate, replace, or improve soils encountered to further reduce the potential for the project components to result in impacts related to expansive soils.

Compliance with existing regulatory requirements and the implementation of APMs and BMPs would ensure that construction and operation of the project would not create substantial direct or indirect risks to property from being located on expansive soils. This impact 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?**

LSPGC and PG&E Project Components

The project involves the construction, operation, and maintenance of electrical infrastructure. The project does not propose the use of septic tanks or alternative wastewater disposal systems. Therefore, **no impact** would occur.

- f) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

There are no known unique geologic features within the project alignment area and LSPGC project components are located on geologic soils too young to have paleontological resources (Chronicle Heritage 2024). Therefore, the following analysis focuses on the project's potential to directly and indirectly destroy a unique paleontological resource or site.

LSPGC Project Components

Construction

Construction of the LSPGC project components would occur in areas underlain by geologic units with low paleontological sensitivity. Geologic units in association with the younger alluvium formation have deposits ranging in size from clay to boulder and are typically too young to have paleontological resources (Chronicle Heritage 2024). Therefore, although construction of LSPGC project components would involve earthwork activities, such as grading and excavation, there would not be potential to disturb geologic units or formations containing buried fossils.

Operation and Maintenance

LSPGC operation and maintenance would not involve any ground-disturbing activities, nor would it create access to previously undeveloped areas that could contain paleontological resources. As such, LSPGC operation and maintenance would not have the potential to directly or indirectly result in the destruction of unique paleontological resources or sites.

PG&E Project Components

Construction

Construction of the PG&E project components would occur in areas underlain by geologic units with low and high paleontological sensitivity. Most PG&E project components are located in areas underlain with the younger alluvium formation that is typically too young to have paleontological resources (Chronicle Heritage 2024). However, a pulling site associated with the proposed PG&E 500 kV Interconnections would be located in an area underlain by the Tulare Formation. The Tulare Formation has a high paleontological sensitivity because similar deposits have yielded fossils in the project vicinity. The pulling site preparation would involve ground disturbance, including vegetation removal and grading, that could impact paleontological resources if present.

Implementation of CMs

PG&E CM PALEO-1 would include various requirements for addressing paleontological resources. The measure would require PG&E to stop construction within 50 feet if a potential paleontological resource is discovered. A qualified paleontologist would evaluate the discovery, and if determined to be significant, PG&E would implement measures to protect and document the paleontological resource. CM PAELO-1 would require treatment and curation of fossils, if needed, to be conducted in consultation with the landowner, PG&E, and the CPUC. The paleontologist would be responsible for developing the recovery strategy and would lead the recovery effort, which would include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.

Operation and Maintenance

PG&E operation and maintenance would not involve any ground-disturbing activities, nor would it create access to previously undeveloped areas that could contain paleontological resources. As such, PG&E operation and maintenance would not have the potential to directly or indirectly result in the destruction of unique paleontological resources or sites.

Conclusion

The LSPGC project components would be constructed in an area with low paleontological sensitivity; therefore, they would not have the potential to directly or indirectly destroy a unique paleontological resource or site. Construction of the PG&E project components would occur in areas underlain by geologic units that range from low to high paleontological sensitivity. Specifically, the pulling site associated with the proposed PG&E 500 kV Interconnections would be located in an area underlain by the Tulare Formation that has high paleontological sensitivity. Excavation and ground-disturbing activities associated with construction of the pulling site for the PG&E 500 kV Interconnections would have the potential to encounter paleontological resources. However, potential direct and indirect impacts on paleontological resources resulting from construction would be avoided with the implementation of CM PALEO-1, which includes requirements for protecting paleontological resources. Impacts would be **less than significant**.

3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

The Physical Scientific Basis of Greenhouse Gas Emissions and Climate Change

Certain gases in the earth’s atmosphere, classified as greenhouse gases (GHG), play a critical role in determining the earth’s surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth’s surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF₆). SF₆ is a commonly used insulator in electricity transmission and distribution equipment. SF₆ is commonly referred to as a high global warming potential (high-GWP) gas because, for a given amount of mass, it traps substantially more heat than CO₂ (EPA 2024). Global warming potential is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO₂. The larger the GWP, the more a given gas warms the earth compared to CO₂ over the same time period (EPA 2024). The GWP for hydrofluorocarbons, perfluorocarbons, and SF₆ can be in the thousands or tens of thousands (EPA 2024). Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth’s climate, known as global climate change or global warming. It is “extremely likely” that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (IPCC 2014).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are

estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013).

Greenhouse Gas Emissions Sources and Sinks

Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water) and are two of the most common processes for removing CO₂ from the atmosphere.

Effects of Climate Change on the Environment

According to the Intergovernmental Panel on Climate Change (IPCC), which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.7 to 4.8 degrees Celsius (°C) (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014:10). According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate, California will experience average daily high temperatures that are warmer than the historical average by 2.5°F from 2006 to 2039, by 4.4°F from 2040 to 2069, and by 5.6°F from 2070 to 2100, and if GHG emissions continue at current rates, then California will experience average daily high temperatures that are warmer than the historical average by 2.7°F from 2006 to 2039, by 5.8°F from 2040 to 2069, and by 8.8°F from 2070 to 2100 (OPR et al. 2018).

Since the state's previous climate change assessment was published in 2012, California has experienced several of the most extreme natural events in its recorded history: a severe drought from 2012 to 2016, an almost nonexistent Sierra Nevada winter snowpack in 2014-2015, increasingly large and severe wildfires, and back-to-back years of the warmest average temperatures (OPR et al. 2018). According to California Natural Resource Agency's *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second-smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). The year 2023 was the warmest year since global records began in 1850 at 1.18°C (2.12°F) above the 20th-century average of 13.9°C (57.0°F). This value is 0.15°C (0.27°F) more than the previous record set in 2016. The 10 warmest years in the 174-year record have all occurred during the last decade (2014–2023) (NOAA 2024). The changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods, which lowers the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires have increased. In November 2018, the Camp Fire completely destroyed the town of Paradise in Butte County and caused 85 fatalities, becoming the state's deadliest fire in recorded history, and the largest fires in the state's history have occurred in the 2018–2020 period. Moreover, changes in the intensity of precipitation events following wildfires can also result in devastating landslides. In January 2018, following the Thomas Fire, 0.5 inches of rain fell in 5 minutes in Santa Barbara causing destructive mudslides formed from the debris and loose soil left behind by the fire.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet and the glaciers atop Greenland, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (OPR et al. 2018).

Temperature increases and changes to historical precipitation patterns will likely affect ecological productivity and stability. Existing habitats may migrate from climatic changes where possible, and habitats and species that lack the ability to retreat will be severely threatened. Altered climate conditions will also facilitate the movement of invasive species to new habitats, thus potentially outcompeting native species. Altered climatic conditions dramatically endanger the survival of arthropods (e.g., insects, spiders), which could have cascading effects throughout ecosystems (Lister and Garcia 2018). Conversely, a warming climate may support the populations of other insects,

such as ticks and mosquitos, which transmit diseases harmful to human health, such as the Zika virus, West Nile virus, and Lyme disease (European Commission Joint Research Centre 2018).

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; OPR et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive physical damage to communities and the state. Among other potential public health impacts, adjusting to the physical changes associated with climate change can produce mental health impacts such as depression and anxiety.

GREENHOUSE GAS EMISSION SOURCES

In 2021, emissions from statewide emitting activities were 381.3 million metric tons of CO₂ equivalent (MMTCO₂e), 12.6 MMTCO₂e higher than 2020 levels and 49.7 MMTCO₂e below the 2020 GHG Limit of 431 MMTCO₂e set forth by Assembly Bill (AB) 32 (see Section 3.8.2, “Regulatory Setting,” for further details regarding GHG reduction goals) (CARB 2023). In 2014, statewide GHG emissions dropped below the 2020 GHG Limit and have remained below the limit since that time. Per capita GHG emissions in California have dropped from a 2001 peak of 13.8 metric tons per person to 9.7 metric tons per person in 2021, a 30-percent decrease. Overall trends in the AB 32 GHG Inventory also continue to demonstrate that the carbon intensity of California’s economy (the amount of carbon pollution per million dollars of gross domestic product) is declining. The continuation of the downward GHG emissions trend from 2021 to 2022 indicates that the increase in emissions from 2020 to 2021 was likely an anomaly caused by broader economic trends related to the COVID-19 pandemic and associated recovery (CARB 2023).

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2021 was 381.3 MMTCO₂e (CARB 2023). Table 3.8-1 summarizes the statewide GHG inventory for California.

Table 3.8-1 Statewide 2021 GHG Emissions by Economic Sector

Sector	Percent
Transportation	39
Industrial	22
Electricity generation (in state)	11
Electricity generation (imports)	5
Agriculture	8
Residential	8
Commercial	6
Not specified	<1

Source: CARB 2023.

As shown in Table 3.8-1, transportation, the industrial sector, and electricity generation are the largest GHG emission sectors statewide.

The project would be located within Fresno County, which is located within the San Joaquin Valley Air Basin under the jurisdiction of SJVAPCD. In March 2024, the Fresno Council of Governments (FCOG) released its Priority Climate Action Plan, which established a baseline GHG inventory for Fresno County using data from 2019. Table 3.8-2 summarizes the results of the initial baseline inventory, which is currently being updated as part of the County’s CAP.

Table 3.8-2 Fresno County GHG Emission Inventory

Economic Sector	GHG Emissions (MTCO ₂ e)	Percent of Total Emissions
Transportation	5,769,119.50	44
Agriculture	2,555,749.14	19
Energy use for residential and commercial buildings	2,307,702.56	17
Industrial	1,732,518.24	13
Waste and wastewater	468,556.29	4
Fugitive emissions	375,459.91	3
Total	13,209,105.64	100

Note: GHG = greenhouse gas; MTCO₂e = metric tons of CO₂ equivalent.

Source: FCOG 2024.

3.8.2 Regulatory Setting

FEDERAL

Supreme Court Ruling

In *Massachusetts et al. v. Environmental Protection Agency et al.*, 549 US 497 (2007), the Supreme Court of the United States ruled that CO₂ is an air pollutant as defined under the federal CAA and that EPA has the authority to regulate GHG emissions. In 2010, the EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, including operating permits for “major sources” issued under Title V of the CAA.

Corporate Average Fuel Economy Standards

NHTSA regulates vehicle emissions through the CAFE Standards. On April 1, 2022, the secretary of transportation unveiled new CAFE standards for 2024–2026 model year passenger cars and light-duty trucks. These new standards require new vehicles sold in the United States to average at least 40 miles per gallon and apply to all states except those that enforce stricter standards.

STATE

Statewide GHG Emission Targets and Climate Change Scoping Plan

Reducing GHG emissions in California has been a priority of the state government for approximately two decades. GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing emissions to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. This target was superseded by AB 1279, which codifies a goal for carbon neutrality and to reduce emissions by 85 percent below 1990 levels by 2045. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2°C, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5°C (United Nations 2015).

CARB adopted the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 16, 2022, which traces the state’s pathway to achieve its carbon neutrality and an 85-percent reduction in 1990 emissions goal by 2045. The plan identifies the reductions needed by each GHG emission sector (e.g., transportation [including off-road mobile source emissions], industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste) to achieve these goals.

The state has also passed more detailed legislation addressing GHG emissions associated with transportation, electricity generation, and energy consumption, as summarized below.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars (ACC) program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel-powered on-road vehicles than the EPA standards. The program's initial goal requiring zero-emission vehicle (ZEV) regulation (i.e., battery, fuel cell, and plug-in hybrid electric vehicles [EVs]) to account for up to 15 percent of California's new vehicle sales by 2025 was superseded by EO N-79-20, which directed the state to scale out the sales of internal combustion engines to 100-percent ZEV sales by 2035. The Advanced Clean Cars II (ACC II) Program was adopted by CARB in August 2022 and provides the regulatory framework for ensuring the sales requirement goal of EO N-79-20 to ultimately reach 100-percent ZEV sales in the state by 2035.

EO B-48-18, signed into law in January 2018, requires all state entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen-fueling stations and 250,000 EV-charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity (CI) of California's transportation fuels. Low-CI fuels emit less CO₂ than other fossil fuel-based fuels, such as gasoline and diesel. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

Legislation Associated with Electricity Generation

Legislation for Carbon-Free Electricity

SB 100 of 2018 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to procure 52 percent of their electricity from renewables by December 31, 2027; 60 percent by December 31, 2030; and 100 percent carbon-free electricity by December 31, 2045. On September 16, 2022, SB 1020 was signed into law. This bill supersedes the goals of SB 100 by requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035; 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040; 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045; and 100 percent of electricity procured to serve all state agencies by December 31, 2035.

Legislation for Electricity Transmission Infrastructure

In 2007, CARB approved the reduction of SF₆ emissions from electricity transmission and distribution equipment as an early action measure under the Global Warming Solutions Act of 2006 (AB 32). CARB's regulation for "Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear" took effect in 2011 and is codified in the same subchapter as CARB's mandatory GHG reporting and cap-and-trade regulations. The Regulation for Reducing Greenhouse Gas Emissions from Gas Insulated Equipment requires switchgear owners to reduce their emission rates, reaching a 1 percent emission rate by 2020, and requires all regulated entities to submit an annual report of the previous year's activities and emissions to CARB by June 1 of each year. The regulation applies to all owners of SF₆-insulated switchgear. In 2022, CARB finalized regulatory amendments to phase out use of SF₆ in gas-insulated equipment (GIE) starting in 2025. The phaseout schedule limits the GIE owners' ability to acquire new SF₆ GIE without an approved SF₆ phaseout exemption. Annual emission limits have also been updated from rate-based to mass-based (EPA 2024).

REGIONAL

San Joaquin Valley Air Pollution Control District

Local air districts act under state law and their discretionary requirements are relevant to PG&E projects. The SJVAPCD is the primary agency responsible for addressing air quality concerns in San Joaquin County. The SJVAPCD recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG

reduction measures for land use development projects. The SJVAPCD published its *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* in 2009, which it incorporated into its 2015 GAMAQI (SJVAPCD 2015). The SJVAPCD developed a three-tiered approach to establish thresholds of significance, including a numerical threshold and two qualitative thresholds, which include implementation of SJVAPCD-adopted best performance standards (BPS) and consistency with a CEQA-backed, adopted climate action plan (CAP). These thresholds provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. The SJVAPCD's goals in developing GHG thresholds include ease of implementation, use of standard analysis tools, and emissions mitigation consistent with AB 32. The SJVAPCD's guidance also requires quantification of GHG emissions for any project in which an EIR is prepared. However, since the passage of SB 32 and AB 1279, which mandate a statewide emissions target of 40 percent below 1990 levels by 2030 and an 85-percent reduction below 1990 levels and carbon neutrality by 2045, respectively, the SJVAPCD has not developed new numerical thresholds in compliance with this target.

LOCAL

Because the CPUC has exclusive jurisdiction over project siting, design, and construction, the PG&E portion of the project is not subject to local (city and county) discretionary regulations. However, local plans and policies are considered for informational purposes.

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC General Order 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 county regulations are not applicable as the County of Fresno does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, this section presents the local laws and regulations pertaining to GHG emissions for informational purposes only.

Fresno County General Plan

The County of Fresno 2024 General Plan includes the following policy related to GHGs relevant to the project:

- ▶ **HS-G.3 Collaborate on Climate Adaptation.** The County shall continue to collaborate with Federal, State, regional, and local agencies, business and property owners, and residents to reduce generation of GHG and other emissions that contribute to climate change and effectively implement climate change adaptation policies and programs.

Fresno Council of Governments Priority Climate Action Plan

The FCOG Policy Board approved the Final Priority Climate Action Plan (PCAP) on February 29, 2024. The PCAP is the first component of the Regional Climate Action Plan that FCOG will be developing. It includes a regional GHG inventory, a public outreach process, identification and quantification of priority GHG emissions reduction measures, a benefit analysis for low-income and disadvantaged communities, and identification of implementation authorities. Since the PCAP primarily focuses on GHG emissions from land use development projects and does not address construction-related GHG emissions from electrical infrastructure projects, the PCAP is not used in this analysis.

3.8.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CMs) that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to GHGs.

LSPGC APMS

- ▶ **APM GHG-1: Greenhouse Gas Emissions Reduction During Construction.** The following measures will be implemented during construction to minimize GHG emissions:
 - If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site.
 - On-road and off-road vehicle tire pressures will be inflated to manufacturer specifications; tires will be checked and reinflated at regular intervals.
 - Demolition debris will be recycled for reuse to the extent feasible.
 - Line power, instead of diesel generators, will be used at construction sites where feasible.
 - Construction equipment will be maintained per the manufacturer's specifications.

PG&E CMS

- ▶ **CM GHG-1: Greenhouse Gas Emissions Reduction During Construction.** The following actions will be taken, as feasible, to minimize greenhouse gas emissions.
 - Encourage construction workers to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the project will depend upon the proximity of carpool facilities to the area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the project's construction schedule.
 - Minimize unnecessary construction vehicle idling time for on-road and off-road vehicles. The ability to limit construction vehicle idling time will depend on the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The project will apply a "common sense" approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.
 - Maintain construction equipment in proper working conditions in accordance with PG&E standards.
 - Minimize construction equipment exhaust by using low-emission or electric construction equipment, where feasible. Portable diesel fueled construction equipment with engines 50 hp or larger and manufactured in 2000 or later will be registered under the CARB Statewide Portable Equipment Registration Program.
 - Minimize welding and cutting by using compression of mechanical applications (utilizing mechanical pressure to create a secure connection between metal components) where practical and within standards.
 - Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available.
 - Encourage recycling construction waste where feasible.

3.8.4 Applicable Threshold

In California, some counties, cities, and air districts have developed guidance and thresholds for determining the significance of GHG emissions that occur within their jurisdiction. The CPUC is the CEQA lead agency for the project and is, therefore, responsible for determining whether an impact would be considered significant.

The State CEQA Guidelines do not provide numeric or quantitative thresholds of significance for evaluating GHG emissions. Instead, they leave the determination of the significance threshold up to the lead agency and give it the discretion to consider thresholds previously adopted or recommended by other public agencies or experts, provided that the lead agency's decision is supported by substantial evidence (State CEQA Guidelines Sections 15064.7[b] and 15064.7[c]).

Courts have ruled that although there are various potential thresholds and methodologies for evaluating project-level GHG emissions consistent with CEQA, use of statewide emission reduction goals is a permissible criterion of significance where substantial evidence and reasoned explanation are provided to close the analytical gap between the level of effort required at one scale (state level) and the level of effort required at another scale (e.g., a project level). The plan to achieve these statewide emission reduction goals is the 2022 Scoping Plan.

The 2022 Scoping Plan assesses progress toward the state's statutory 2030 target, outlining different scenarios for achieving statewide carbon neutrality by 2045. The 2022 Scoping Plan identifies GHG reductions strategies and actions for several sectors, which include the energy, transportation, industrial, and natural lands sectors. Specifically, the 2022 Scoping Plan states that much of California's success to date in reducing GHGs is due to decarbonization of the electricity sector through the implementation of the Renewable Portfolio Standard, SB 100, and the Cap-and-Trade Program (CARB 2022b). The 2022 Scoping Plan also identifies that climate change is causing a significant strain on the state's energy system and that action must be taken to improve the resilience and reliability of the state's energy grid through actions such as increasing grid capacity to accommodate increased demand, transitioning to renewable energy systems, updating components of existing energy facilities, and adding an increased number of efficient energy storage and transmission systems. Because the project involves additions and improvements to the electrical grid, consistency with the goals of the 2022 Scoping Plan is the appropriate significance threshold used for this analysis.

3.8.5 Discussion

a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

LSPGC and PG&E Project Components

As stated above, consistency with the goals of the 2022 Scoping Plan is utilized as the significance threshold for this analysis. Therefore, the estimation of GHG emissions from construction and operation and maintenance of the project provided below are for informational purposes only.

Construction and Decommissioning

GHG emissions associated with construction and decommissioning of the LSPGC and PG&E portions of the project would result from the use of off-road equipment (e.g., excavators, a helicopter, and augers), material delivery trips (e.g., gravel for filling, electrical poles, and equipment for the Manning Substation), and on-road vehicle trips associated with worker commute trips, as well as line trucks and boom trucks.

It is recognized by multiple air quality planning agencies, in their respective CEQA guidance documents, that construction-related GHG emissions from projects occur over a relatively short-term period of time and contribute a relatively small portion of the overall lifetime project GHG emissions (SCAQMD 2008: 3-9; BAAQMD 2022: 6-7). To provide a more comprehensive assessment of cumulative GHG-emissions-related effects, as detailed in Section 3.8.1, "Environmental Setting," above, this analysis utilizes the method of amortizing (averaging annually) a project's construction emissions over the total life of the project, as endorsed by the South Coast Air Quality Management District (SCAQMD). This approach accounts for the persistence of GHG emissions in the environment (i.e., the temporary emission sources that result in emissions that persist over many years) and ensures that any potential mitigation measures account for construction GHG emissions as part of the total emissions considered and mitigated.

Therefore, the project's construction and decommissioning related emissions were quantified for total construction emissions and amortized over 30 years (i.e., the typical lifetime of a project as identified by SCAQMD) (SCAQMD

2008). Decommissioning emissions are assumed to be similar to but less than construction emissions because additional emissions reduction technologies are practices would be in place when decommissioning would occur.

Operation and Maintenance

Operation of the project would begin in 2029 following the cessation of construction activities. While most operational activities would be managed off-site, regular maintenance for the LSPGC and PG&E facilities would include quarterly and annual inspections, depending on the facility.

The LSPGC portion of the project would be operated and monitored remotely by LSPGC's control center in Austin, Texas, and the CAISO's control center in Folsom, California. Quarterly inspections of the proposed Manning Substation would be conducted, and a small crew of workers would perform more extensive maintenance activities. Routine maintenance of the proposed LSPGC 230 kV transmission line would require approximately one trip per year by crews of one to four people. In general, quarterly inspections would be performed for the Manning Substation. These inspections would be performed without taking the substation out of service. It is anticipated that equipment located at the Manning Substation facility would be taken out of service periodically to perform more extensive checks and maintenance on the main components of the facility. Due to the diversity of equipment and the individual system components, a small, specialized team would be utilized to perform more extensive maintenance activities.

PG&E's local maintenance/technical staff and outside resources would respond to maintenance issues and emergency situations. No additional staff would be hired to support operation and maintenance of the project. PG&E would continue its regular inspections at its existing substations and the Tranquillity Switching Station. PG&E would normally perform routine ground inspections of substation and switching station facilities quarterly using the access roads that were constructed for this purpose.

Transmission lines would be inspected annually by PG&E routine patrols, either from the ground or by a drone/helicopter. The inspection process would involve routine patrols from existing local staff either on the ground or by helicopter tasked with patrolling the transmission lines. Normal inspection and patrols would typically be completed in a pickup truck or an off-road utility vehicle. While not expected, if vehicle access is not available, an inspector would complete portions of the inspection on foot. Climbing inspections would be performed on an as-needed basis based on specific identified conditions and in compliance with CAISO guidelines and regulations. As a conservative estimate, it was assumed that the project would generate five trips per month.

Project Emissions

The anticipated emissions associated with the LSPGC and PG&E project components are presented in Table 3.8-3 for informational purposes.

Table 3.8-3 Annual GHG Emissions

Emission Source	MTCO ₂ e
Construction ¹	216
Operation and maintenance	2,873
Vehicle use	2.5
Electricity consumption	36
Fugitive SF ₆ losses ²	2,835
Total	3,089

Notes: MTCO₂e = metric tons of carbon dioxide equivalent; SF₆ = sulfur hexafluoride. Total may not sum due to rounding.

¹ Construction emissions have been amortized over a 30-year period and would include decommissioning.

² SF₆ is a potent greenhouse gas used as an insulator in some high-voltage equipment and circuit breakers. SF₆ losses occur through poor gas handling practices during equipment installation, maintenance and decommissioning; and leakage from SF₆-containing equipment.

Source: Modeling performed by Insignia Environmental in 2024.

Implementation of APMs and CMs

To further reduce GHG emissions, LSPGC and PG&E would implement APM GHG-1 and CM GHG-1, respectively. APM GHG-1 would require that LSPGC construction workers be encouraged to carpool to the job site (if suitable park-and-ride facilities are available in project vicinity), vehicles and equipment be properly maintained, construction debris be recycled, and line power be used in lieu of diesel generators when feasible. CM GHG-1 would require that PG&E construction workers be encouraged to carpool to the job site (if suitable park-and-ride facilities are available in project vicinity), unnecessary construction vehicle idling time for on-road and off-road vehicles be minimized so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law, vehicles and equipment be properly maintained, construction equipment exhaust be minimized by using low-emission or electric construction equipment (where feasible), construction debris be recycled, and natural gas-powered vehicles for passenger cars and light-duty trucks be used where feasible and available.

Conclusion

As noted above, the project is evaluated for consistency with the goals of the 2022 Scoping Plan to determine if there would be a significant GHG impact. The ultimate objective of the 2022 Scoping Plan is to achieve the state's goals of reducing GHG emissions by 85 percent below 1990 levels and achieving carbon neutrality by 2045. As of 2022, California experienced 3 straight years of energy reliability challenges. This includes a multiday extreme heat event across the western United States with temperatures up to 20 degrees above normal in California, which resulted in rotating grid outages in August 2020 (CARB 2022a). In 2021, heat waves prompted a grid warning, and the onset of emergency conditions and wildfire caused the loss of one transmission line, reducing import capability by 3,000 megawatts (MW) into the CAISO balancing authority area. From August 31 through September 9, 2022, a 10-day extreme heat event resulted in a sustained period of high peak loads in the CAISO system, averaging 47,000 MW and maxing at an all-time record of over 52,000 MW on September 6. Because of the increasing stress placed on California's energy grid related to the effects of climate change, the 2022 Scoping Plan identifies a clean, affordable, and reliable electricity grid as one of six "key sectors" targeted for GHG reductions. Furthermore, of these six key sectors, the 2022 Scoping Plan identifies the electricity sector as one of the largest contributors of GHGs in the state and presents some of the largest opportunities for GHG reductions. To support the reduction of GHG emissions from the electricity sector, the 2022 Scoping Plan states that clean energy production and distribution (i.e., electricity transmission infrastructure) would need to grow "at unprecedented rates" to ensure reliability, affordability, and resiliency in California's electricity sector (CARB 2022b).

To further demonstrate the urgency of implementing GHG-reducing actions, the 2022 Scoping Plan includes an uncertainty analysis, which utilizes a "reference scenario" that quantifies the increase in GHG emissions that could result from two scenarios: a 5-year delay in renewable capacity and a 5-year delay in transportation electrification. GHG emissions from these two scenarios are compared to a reference scenario of California's projected GHG emissions in 2030. The reference scenario is the assessment of current trends and expected performance of policies identified in the 2017 Scoping Plan, as of February 2022. Notably, the uncertainty analysis focuses on progress on achieving the 2030 target of at least 40 percent below 1990 levels by 2030 and does not include an assessment of the uncertainty faced in implementing the Scoping Plan scenario for achieving carbon neutrality by 2045. Of the two scenarios, the "delayed renewable capacity" scenario is identified as having the potential to result in the greatest amount of GHG emissions. The uncertainty analysis found that a 5-year delay in the statewide implementation of increased renewable capacity and electricity transmission infrastructure would increase emissions by 8 percent in 2030 (25 MMTCO₂e) relative to the reference scenario, which estimates emissions in 2030 to be 324 MMTCO₂e (CARB 2022). The analysis concludes that this would jeopardize the state's ability to achieve the 2030 target.

As described in Section 2.4.1, "Existing System Reliability," the existing system currently experiences overloads under normal and contingency conditions as determined by CAISO. With insufficient transmission capacity and lower voltages, the system has become less reliable. Overloads to the system result in insufficient transmission capacity, transmission losses, minor disturbances and interruptions to service, and reduced voltage control and stability, limiting the deliverability of energy. Therefore, as stated in Section 2.5 "Project Objectives," the project is intended to, among other objectives, address critical reliability issues within the transmission system, improve and maintain the reliability of the transmission grid, and increase deliverability of renewable power by building and operating a facility

that would help keep transmission voltages within specified parameters. In addition, the project would reduce transmission losses, increase reactive margin for the system bus, increase transmission capacity, provide a higher transient stability limit, increase damping of minor disturbances, and provide greater voltage control and stability. The project would also assist CAISO in meeting applicable Reliability Standards and Criteria developed by the NERC, WECC, and CAISO. LSPGC would design and construct the project in conformance with LSPGC's standards, the National Electric Safety Code, and other applicable national and state codes and regulations. Therefore, the project would serve the purpose of improving the resilience and reliability of the region's electrical grid and, ultimately, the state's electrical grid. By increasing the reliability of the power system in the project vicinity, existing electricity customers would have access to safe and reliable electricity. This reliable electricity source would be capable of supporting additional electrification of customer operations, which would support the state's overarching goals of mobile source electrification and building decarbonization. This would support reduced GHG emissions and the transition away from fossil fuels. This would be consistent with the goal of the 2022 Scoping Plan to expand clean energy production and distribution infrastructure to ensure reliability, affordability, and resiliency in California's electricity sector. In addition, implementation of the project would aid in addressing the "delayed renewable capacity" scenario in the uncertainty analysis included in the 2022 Scoping Plan by increasing the transmission capacity of the state's grid, allowing for increased generation and distribution of renewable energy. For example, one of the objectives of the project is to interconnect with future renewable projects in the area, such as Westland solar projects, and improve and maintain the reliability of the transmission grid and increase deliverability of renewable power. This would be consistent with the short-term goal of the 2022 Scoping Plan to achieve the 2030 target of reducing GHG emissions at least 40 percent below 1990 levels by 2030.

Furthermore, Appendix D, "Local Actions," of the 2022 Scoping Plan directs local agencies to reduce GHG emissions in several key sectors including transportation electrification and building decarbonization. By increasing load capacity and reliability, the project would be supporting the reduction of GHG emissions in these key areas. In addition, the project would improve the electric transmission infrastructure in the region and would therefore support both existing and future renewable electric generation (e.g., wind, solar, hydro, and thermal). Given that these are goals identified for the energy sector in the 2022 Scoping Plan, the project would be consistent with the reduction goals of the 2022 Scoping Plan. The project would align with the goals of the 2022 Scoping Plan to improve grid reliability and resilience by increasing grid capacity to accommodate additional energy demand, the transition to renewable energy systems, updated existing energy facilities, and an increased number of efficient energy storage and transmission systems. This impact would be **less than significant**.

b) Conflict With an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?

The potential for the project to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs (i.e., the 2022 Scoping Plan) is discussed under item "a," above.

3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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/or 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 type="checkbox"/>	<input checked="" 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"/>
h) Create a significant hazard to air traffic from the installation of new power lines and structures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Create a significant hazard to the public or environment through the transport of heavy materials using helicopters?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Expose people to a significant risk of injury or death involving unexploded ordnance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
k) Expose workers or the public to excessive shock hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

HAZARDOUS MATERIALS

Hazardous Sites

A report summarizing regulatory agency database listings was reviewed to screen for nearby hazardous sites and recognized environmental conditions that may exist within the project alignment area (EDR 2023). The project alignment area is not listed as a hazardous materials site, nor are there any active sites within 1 mile of the project alignment (DTSC 2024; SWRCB 2024). In addition, a Phase I Environmental Site Assessment (ESA) was performed for the proposed Manning Substation site in August 2023 (Mathis and Associates 2023). The objective of the Phase I ESA was to determine the presence or absence of recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs), as defined by American Society for Testing and Materials (ASTM) Standard E1527-21. The ESA concluded no findings of RECs, CRECs, or HRECs, as well as no hazardous substances, storage tanks, or solid wastes in the project alignment area (Mathis and Associates 2023).

Agricultural Chemicals

Active agricultural and farming operations in the project alignment area use agricultural chemicals, including pesticides and herbicides, as a standard practice. Continuous spraying of crops over many years can potentially result in a residual buildup of pesticides in farm soils. Residual concentrations of pesticides, including substances no longer used, may be present in soil because of historical agricultural application and storage.

HAZARDS

Airports and Airstrips

There are no active public airports or private airstrips within 2 miles of the project alignment area. FCOG is responsible for the Fresno County Airport Land Use Compatibility Plan (ALUCP). The ALUCP safety zone land use compatibility standards restrict development of land uses that could pose hazards to the public in the event of an aircraft accident (FCOG 2023). The Fresno County ALUCP identifies the three public airports nearest to the project alignment area. The proposed LSPGC 230 kV transmission line's connection point at PG&E's existing Tranquillity Switching Station would be approximately 11 miles southwest of the William Robert Johnston Municipal Airport, approximately 10 miles west of the San Joaquin Airport, and approximately 17 miles south of the Firebaugh Airport.

Wildland Fire Hazards

Although all of California is subject to some degree of wildfire hazard, specific features make certain areas more hazardous. The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (PRC Sections 4201–4204 and Government Code Sections 51175–51189). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. When development spreads into less populated areas, it increases the number of people living in areas prone to wildfire.

The CAL FIRE Fire Hazard Severity Zone (FHSZ) maps identify Federal Responsibility Areas (FRAs), State Responsibility Areas (SRAs), and Local Responsibility Areas (LRAs) for preventing or suppressing fires. Within SRAs, the director of CAL FIRE has designated areas as moderate, high, and very high FHSZs based on factors such as potential fuel sources, terrain, weather, fire behavior characteristics, burn probabilities, and the likelihood of vegetation exposure. Within local responsibility areas, CAL FIRE has recommended the locations of very high FHSZs that may or may not be adopted by local governing agencies. The CAL FIRE maps also show FRAs and fire hazard designations within those federal areas. The CPUC has adopted fire hazard mapping, most recently with its *High Fire-Threat Map* in 2021, which designates fire-threat areas that require enhanced fire safety (CPUC 2021).

Project Alignment Area Fire Hazard

The project alignment area is not located in an area of high fire hazard. According to the CAL FIRE maps, the project alignment would be in both an LRA and an SRA (CAL FIRE 2024). All project components east of I-5 in Fresno County are located entirely within LRAs and are not in an identified severity zone (CAL FIRE 2024) (see Figure 3.20-1).

The CPUC created a statewide High Fire Threat District (HFTD) map to show areas where there is an increased risk for utility-associated wildfires. All project components would be located outside of mapped fire hazard zones on the CPUC's HFTD map. The nearest CPUC-designated Tier 3 Extreme fire zone is located approximately 76 miles northeast of the easternmost extent of the project alignment area (CPUC 2021).

Facilities Potentially Susceptible to Induced Current

Existing infrastructure that may be susceptible to induced current is metallic in nature. This may include existing hazardous liquid pipelines, natural gas transmission pipelines, water pipelines, and other linear metallic infrastructure. The project would cross or generally occur adjacent to multiple existing pipelines.

SENSITIVE RECEPTORS

Residences

There are no residential communities within 0.25 miles of the project alignment area. A few single-family residences are within the vicinity of the project alignment area. These include a single-family residence located approximately 3,400 feet northeast of the substation site boundary, single-family residences approximately 1,090 feet south and 190 feet north of the proposed PG&E 230 kV Reconductoring and LSPGC 230 kV transmission line, and a single-family residence located 662 feet north of the PG&E Panoche Substation Interconnection Modifications.

Schools

Children are particularly susceptible to long-term effects of exposure to emissions of hazardous materials. Therefore, locations where children spend extended periods of time, such as schools, require extra care concerning hazardous air emissions and accidental release associated with the handling of extremely hazardous materials, substances, and wastes. No existing or proposed schools are within 0.25 miles of the project alignment area. The nearest schools and their approximate distances from the project alignment area are:

- ▶ Cantua Elementary School, approximately 8 miles southeast of the existing PG&E Tranquillity Station;
- ▶ Tranquillity Elementary School, approximately 10 miles northeast of the existing PG&E Tranquillity Station proposed substation and 1.6 miles north of the transmission line alignment; and
- ▶ San Joaquin Elementary School, approximately 14 miles east of the existing PG&E Tranquillity Station.

3.9.2 Regulatory Setting

FEDERAL

Resource Conservation and Recovery Act

In California, the Resource Conservation and Recovery Act (RCRA) program (42 USC Section 6901 et seq.) is administered by the California Environmental Protection Agency (CalEPA) and California Department of Toxic Substances Control (DTSC), per direction of EPA, which regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC Chapter 103) and associated Superfund Amendments provide the EPA with the authority to identify hazardous sites, to require site remediation, and to recover the costs of site remediation from polluters. CERCLA also enabled the revision of the

National Oil and Hazardous Substances Pollution Contingency Plan, also known as the National Contingency Plan (NCP). The NCP provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

Spill Prevention, Control, and Countermeasure Rule

The purpose of the Spill Prevention, Control, and Countermeasure (SPCC) rule (40 CFR Parts 112.1–112.7) is to help facilities prevent the discharge of oil into navigable waters or adjoining shorelines. The SPCC rule requires facilities to develop, maintain, and implement an oil spill prevention plan, called an SPCC Plan. These plans help facilities prevent oil spill, and control a spill should one occur. The SPCC rule requires the owner or operator of the facility to prepare and implement an SPCC Plan. The plan must be maintained at the location of the facility that is normally attended for at least 4 hours per day.

Federal Water Pollution Control Act

The EPA designates hazardous substances under the Federal Water Pollution Control Act (40 CFR Chapter I, Subchapter D, Parts 116 and 117) and determines quantities of designated hazardous substances that must be reported (40 CFR Part 116) or that may be discharged into waters of the United States (40 CFR Part 117).

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 (15 USC Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The federal law encourages emergency planning efforts at the state and local levels to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- ▶ emergency planning,
- ▶ emergency release notification,
- ▶ reporting of hazardous chemical storage, and
- ▶ inventory of toxic chemical releases.

Federal Hazardous Materials Transportation Law

The US Department of Transportation regulates the transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.), is the basic statute regulating transport of hazardous materials in the United States. There are registration requirements for individuals that offer and accept hazardous wastes, and hazardous materials must be properly classed, described, packaged, marked, and labeled. Hazardous materials transport regulations are enforced by the Federal Highway Administration (FHWA), the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration (FAA).

Transformer Oil Transport and Recycling

Title 49 CFR Part 130 applies to the transport of transformer oil (mineral oil) when shipped in containers of 3,500 gallons or more. According to 49 CFR Part 130, containers used for the transportation of oil subject to this part must be designed, constructed, maintained, closed, and loaded such that under conditions normally incident to transportation,

there will be no release of oil to the environment. In addition, a response plan must be developed pursuant to 49 CFR Part 130 requirements. Standards for recycling used transformer oil are established in 40 CFR Part 279.

Title 29 Worker Safety Regulations

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching. The Hazard Communication Standard (CFR Title 29, Part 1910) requires that workers be informed of the hazards associated with the materials they handle. Workers must be trained in safe handling of hazardous materials, use of emergency response equipment, and building emergency response plans and procedures. Containers must be labeled appropriately, and material safety data sheets must be available in the workplace.

Federal Aviation Administration Regulations

FAA regulates the safe use and preservation of navigable airspace. FAA must be notified of any structures located in the airspace of an airport as defined in 14 CFR Section 77.9(b)(1), (2), and (3), or new structures taller than 200 feet in height, to confirm that the proposed structures would not pose a threat to safety.

The Airport Land Use Commission (ALUC) adopted 14 CFR Part 77, Objects Affecting Navigable Airspace, using imaginary surfaces to determine height restrictions for natural and artificial objects. These federal regulations govern project design. However, FAA regulations relating to objects affecting navigable airspace contained in 14 CFR 77, Subpart C, do not apply to a pole, pole line, distribution or transmission tower, or tower line or substation of a public utility.

STATE

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) (CCR Title 27) was mandated by the state of California in 1993. The Unified Program was created to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for six hazardous materials programs. The program has the following six elements:

- ▶ Hazardous Waste Generators and Hazardous Waste On-Site Treatment,
- ▶ Underground Storage Tanks (USTs),
- ▶ Aboveground Petroleum Storage Act,
- ▶ Hazardous Materials Release Response Plans and Inventories,
- ▶ California Accidental Release Prevention, and
- ▶ Uniform Fire Code Hazardous Materials Management Plans and Hazardous Materials Inventory Statements.

At the local level, implementation of a Unified Program is accomplished by identifying a Certified Unified Program Agency (CUPA) that coordinates all of these activities to streamline the process for local businesses. The San Joaquin County Environmental Health Department is approved by the CalEPA as the CUPA for San Joaquin County.

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined under this act as raw or unused materials that are part of a process or manufacturing step.

The corresponding state law is Chapter 6.95 of Division 20 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). The California Health and Safety Code (Section 25507) requires a business plan for emergency response for facilities that store hazardous materials in excess of 55 gallons (liquid), 500 pounds (solid), or 200 cubic feet (gas). Under this law, qualifying businesses are required to prepare a hazardous materials business plan (HMBP), which includes hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment.

The CalEPA oversees the implementation of the HMBP program at the state level. CUPAs and participating agencies implement the program at the local level and are responsible for enforcement and administration in their respective jurisdictions. When the applicant begins to use hazardous materials at levels that reach applicable state or federal thresholds, the plan is submitted to the administering agency. The oil used in transformers is managed as hazardous waste until tests show it is not hazardous (Health and Safety Code section 25250.4).

Government Code Section 65962.5: Cortese List

The DTSC, a division of the CalEPA, has primary regulatory responsibility over hazardous materials in California, working in conjunction with the EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, the DTSC maintains a hazardous waste and substances site list for the state, known as the Cortese List. The Cortese List includes all hazardous waste facilities subject to corrective action; land designated as hazardous waste property or border zone property; information received by the DTSC about hazardous waste disposals on public land; sites listed pursuant to Section 25356 of the Health and Safety Code 41 (removal and remedial action sites); and sites included in the Abandoned Site Assessment Program. The Cortese List includes the State Water Resources Control Board's (SWRCB's) Geotracker database, solid waste disposal sites list, Cease and Desist Orders and Cleanup and Abatement Orders list; and the DTSC's EnviroStor database and hazardous waste sites.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted US Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 CCR. State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies in the project area.

Porter-Cologne Water Quality Control Act

Through the Porter-Cologne Act and the National Pollutant Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. California's RWQCBs require a Construction Activities Storm Water General Permit (Order 2009-12 0009-DWQ) for stormwater discharges associated with any construction activity, including clearing, grading, excavation reconstruction, and dredge and fill activities, that results in the disturbance of at least 1 acre of total land area. The applicant is required to apply for coverage under the NPDES Construction General Permit and prepare a SWPPP for the water board's review and approval. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A SWPPP must be developed and implemented for each site covered by the permit. The SWPPP must include best management practices (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project. The BMPs must address source control and, if necessary, pollutant control. For a detailed description of the Porter-Cologne Act, the NPDES program, and the role of the Central Valley RWQCB, see Section 3.11, "Hydrology and Water Quality."

Hazardous Waste Fee Health and Safety Code

The Hazardous Waste Fee Health and Safety Code (Chapter 6.5, Section 25143 et seq.) provides definitions and guidance on wood waste and its disposal. Wood waste is defined in part as poles, crossarms, pilings, and fence posts that have been previously treated with a preservative.

Wood waste materials removed from electric, gas, or telephone service are exempt from the requirements for disposal provided certain conditions are met:

- ▶ The wood waste is not subject to regulation as a hazardous waste under a federal act and it is disposed of in a composite-lined portion of a municipal solid waste landfill that meets the requirements imposed by the state policy adopted pursuant to Section 13140 of the Water Code and regulations adopted pursuant to Sections 13172 and 13173 of the Water Code.
- ▶ The solid waste landfill used for disposal is authorized to accept the wood waste under waste discharge requirements issued by the RWQCB pursuant to Division 7 (commencing with Section 13000) of the Water Code.

California Occupational Safety and Health Administration Worker Safety Requirements

The California Division of Occupational Safety and Health (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices. Cal/OSHA enforces regulations on hazard communication programs and mandates specific training and information requirements. These requirements include procedures for identifying and labeling hazardous substances, providing hazard information about hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. Furthermore, as required by Cal/OSHA's Hazard Communication Standard (29 CFR 1910.1200[g]), employers must make material safety data sheets available to employees and document employee information and training programs.

Cal/OSHA regulations on electrical safety are grouped by electrical voltage. Regulations for low voltage (i.e., up to 600 volts) are provided in Sections 2299–2599 of the CCR, and the regulations for high voltage (i.e., above 600 volts) are in Sections 2700–2989. Section 1518 addresses the safety requirements for the protection of workers and others from electric shock in construction.

California Fire Code

The California Fire Code 2010 (CCR Title 24, Part 9) is based on the International Fire Code from the International Code Council and contains consensus standards related to establishing good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, and dangerous conditions in new or existing buildings, structures, and premises.

California Public Resources Code

The PRC provides regulations to enhance safety with regard to the operation and maintenance of electrical transmission lines. The PRC includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify the 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.

Specifically, Sections 4292 and 4293 of the PRC address vegetation management in transmission line corridors as follows:

- ▶ **PRC Section 4292:** This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. At least a 10-foot radius around such structures must remain clear of vegetation for the entirety of the fire season.

- **PRC Section 4293:** This section requires specific clearance between conductors and vegetation. As the line voltage increases, the clearance radius also increases. In addition, some trees must be removed if they pose the potential to fall on an electrical transmission line and cause damage.

CPUC General Order 95: Rules for Overhead Electric Line Construction

GO 95 regulates the design, construction, operation, and maintenance of overhead electric lines in California. This order includes safety standards such as minimum conductor ground clearance, electric line inspection requirements, and vegetation clearance requirements. Rule 35 (Tree Trimming) defines minimum vegetation clearances around distribution lines and requires 10 feet of radial clearances for any conductor of a line operating at more than 110,000 volts and less than 300,000 volts. This rule also requires that utility providers remove dead, rotten, and diseased trees that overhang or lean toward a span of an electric line. Rule 31.2 (Inspection of Lines) requires that lines be inspected frequently to ensure that they are in good condition and that lines temporarily out of service be inspected and maintained to prevent a hazard.

CPUC General Order 128: Rules for Construction of Underground Electric Supply and Communication Systems

GO 128 establishes requirements for the construction, operation, and maintenance of all underground electric supply and communications systems under CPUC jurisdiction to ensure safe design and operation of underground electrical facilities, including design and inspection criteria.

CPUC General Order 166: Standards for Operation, Reliability, and Safety during Emergencies and Disasters

GO 166 applies to all electric utilities subject to the jurisdiction of the CPUC and addresses electric service reliability and safety. The purpose of this order is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters to minimize damage and inconvenience to the public that may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. Investigations required by this order are conducted following every major outage, pursuant to and consistent with Public Utilities Code Section 364(c) and CPUC policy.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024) contains the following policies that are relevant to the project:

- **Policy HS-A.1:** The County shall, through the Fresno County Operational Area Master Emergency Services Plan and the Fresno County Multi-Hazard Mitigation Plan, maintain the capability to effectively respond to emergency incidents, including maintenance of an emergency operations center.
- **Policy HS-B.1:** The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.

- ▶ **Policy HS-B.2:** The County shall ensure that development in high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards by increasing resistance of structures to heat, flames, and embers. The County shall review current building code standards and other applicable statutes, regulations, requirements, and guidelines regarding construction, and specifically the use and maintenance of non-flammable materials (both residential and commercial) and consider adopting amendments to Title 15 of the County Ordinance Code (Building and Construction) to implement appropriate standards. Special consideration shall be given to the use of fire-resistant construction in the underside of eaves, balconies, unenclosed roofs and floors, and other similar horizontal surfaces in areas of steep slopes.
- ▶ **Policy HS-B.3:** The County shall coordinate with telecommunication service entities to fire-harden communications.
- ▶ **Policy HS-B.7:** The County shall require new discretionary development projects 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. The County shall implement feasible recommendations in AB2911 Office of the State Fire Marshall Subdivision Survey Reports, which survey subdivisions without a secondary means of egress routes for evacuation and other fire safety factors.
- ▶ **Policy HS-E.2:** The County shall ensure that new development, including public infrastructure projects, does not create safety hazards such as glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards.

Fresno County Master Emergency Services Plan

The Fresno County Office of Emergency Services prepared the 2017 master plan to serve as a guide for responding to extraordinary situations that may constitute a State of Emergency, as defined by state law, 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. The plan describes mitigation, preparedness, response, and recovery concepts to help guide emergency and disaster planning. The plan does not describe or recommend specific evacuation routes within the county. The plan makes general recommendations for facilities suited for use as public shelters, such as using public schools and community centers. Hazard-specific response plans and standard operating procedures are being developed to supplement the master plan (Fresno County 2017).

3.9.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to hazards and hazardous materials.

LSPGC APMs

- ▶ **APM HAZ-1: Air Transit Coordination.** LSPGC will implement the following protocols related to helicopter use during construction and air traffic:
 - LSPGC will comply with all applicable FAA regulations regarding air traffic within 2 miles of the project alignment.
 - LSPGC's helicopter operator will coordinate all project helicopter operations with local airports before and during project construction.
 - Helicopter use and landing zones will be managed to minimize impacts on local residents.
- ▶ **APM BIO-3: Worker's Environmental Awareness Program.** A WEAP will be designed, implemented, and provided to all project personnel, including construction supervisors and field personnel, prior to personnel commencing work on the project. The WEAP will inform all construction personnel of the resource protection and avoidance

measures, as well as procedures to be followed upon the discovery of environmental resources. Additionally, the WEAP will train all construction personnel on hazardous materials management, hazardous wastes and stained or odiferous soils identification, and applicable regulations. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:

- A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to environmental and biological resource protection;
 - Training on how to identify sensitive or special-status biological resources, environmentally sensitive area boundaries, housekeeping (i.e., trash and equipment cleaning), safety, work stoppage, and communication protocol;
 - A discussion of procedures to be followed in the event that unanticipated sensitive or special-status biological resources are discovered during implementation of the Proposed Project;
 - A discussion of disciplinary and other actions that could be taken against persons violating environmental and biological resource protection laws and applicant policies;
 - Training on the handling, storage, and disposal of hazardous materials and wastes in accordance with applicable regulations;
 - Training on the identification of potentially hazardous wastes and stained or odiferous soils; and
 - A statement by the construction company or applicable employer agreeing to abide by the WEAP and other applicable laws and regulations.
 - The WEAP will be submitted to and approved by the CPUC prior to construction.
- **APM FIRE-1: Construction Fire Prevention Plan.** A proposed project-specific construction fire prevention plan (CFPP) will be prepared and submitted to the CPUC for review prior to initiation of construction. The CFPP will be fully implemented throughout the construction period and would include, at a minimum, the following:
- The purpose and applicability of the plan.
 - Responsibilities and duties.
 - Preparedness training and drills.
 - Procedures for fire reporting, response, and prevention that include the following:
 - Identification of daily site-specific risk conditions.
 - The tools and equipment needed on vehicles and to be on hand at sites.
 - Reiteration of fire prevention and safety considerations during tailboard meetings.
 - Daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible activity.
 - Coordination procedures with federal and local fire officials.
 - Crew training, including fire safety practices and restrictions.
 - Method(s) for verifying that all Plan protocols and requirements are being followed.

A proposed project fire marshal or similarly qualified position will be established to enforce all provisions of the CFPP, and perform other duties related to fire detection, prevention, and suppression for the proposed project. Construction activities will be monitored to ensure implementation and effectiveness of the CFPP.

PG&E CMs

- ▶ **CM HAZ-1: Hazardous-Substance Control and Emergency Response.** PG&E will implement standard hazardous substance control and emergency response procedures to ensure the safety of the public and site workers during construction. The procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on-site. If it is necessary to store chemicals on-site, they will be managed in accordance with all applicable regulations. Material safety data sheets will be maintained and kept available on-site, as applicable.

Project construction will involve soil surface blading/leveling, excavation of up to several feet, and auguring to a maximum depth of 35 feet in some areas. 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 will be tested, and if contaminated above hazardous waste levels, will be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.

All hazardous materials and hazardous wastes will be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following:

- Proper disposal of potentially contaminated soils.
 - Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources.
 - Emergency response and reporting procedures to address hazardous material spills.
 - Stopping work at that location and contacting the County Fire Department Hazardous Materials Unit immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Unit.
- ▶ **CM HAZ-2: Worker Environmental Awareness.** The training will include the following components related to hazards and hazardous materials:
 - PG&E Health, Safety, and Environmental expectations and management structure.
 - Applicable regulations.
 - Summary of the hazardous substances and materials that may be handled and/or to which workers may be exposed.
 - Summary of the primary workplace hazards to which workers may be exposed.
 - Overview of the controls identified in the SWPPP.
 - ▶ **CM HAZ-3: Air Transit Coordination.** PG&E will implement the following protocols related to helicopter use during construction and air traffic:
 - PG&E will comply with all applicable FAA regulations regarding air traffic within 2 miles of the Proposed Project alignment.
 - PG&E's helicopter operator will coordinate all Proposed Project helicopter operations with local airports before and during Proposed Project construction.
 - Helicopter use and landing zones will be managed to minimize impacts on local residents.
 - ▶ **CM FIRE-1: Fire Risk Management.** PG&E will follow its standard fire risk management procedures, including:
 - Safe work practices, training, and fire response.

- Proposed project personnel will be directed to park away from dry vegetation.
 - During fire season in designated State Responsibility Areas and Local Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federally approved or State-approved spark arrestors.
 - All off-road vehicles will be equipped with a backpack pump (filled with water) and a shovel.
 - Fire-resistant mats and/or windscreens will be used when welding. In addition, during fire "red flag" conditions (as determined by CAL FIRE), welding will be curtailed.
 - Every fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C (i.e., fire extinguisher to extinguish a Class B fire [flammable liquid or gas] and Class C fire [electrical fire]), and all flammable materials will be removed from equipment parking and storage areas.
 - Coordinate procedures with federal and local fire officials.
 - Identification of daily site-specific risk conditions.
- **CM GEN-1: Standard Construction Practices.** The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts.
- Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
 - Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety.
 - Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable.
 - Speed limit: vehicles will not exceed a speed limit of 15 mph in the ROWs or on unpaved roads within sensitive land-cover types.
 - Restoration and erosion control: on completion of any project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions.
 - Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or U.S. Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures.
 - Staging Area Maintenance: Work sites would be maintained in a clean and orderly State.
 - Environmentally Sensitive Areas: Biological field surveys would be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities.
 - Aquatic resources: All aquatic resources would be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas.
 - Vegetation: Vegetation and tree removal would be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements.
 - Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday would be covered, or a wildlife escape ramp would be installed to prevent the inadvertent entrapment of wildlife.
 - Delineation of Work Areas: Work areas would be clearly delineated prior to construction commencing with fencing, staking, or flags.

3.9.4 Discussion

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

LSPGC Project Components

Construction

Construction of the project would require the use of hazardous materials, such as diesel fuel, gasoline, mineral oil, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, cement slurry, and chemicals associated with vehicles and construction activities. In addition, the project would include transformers containing mineral oil and lead-acid batteries from the Manning Substation, which are considered hazardous materials in the state of California. However, as included in Section 2.8.11 of the Project Description, all hazardous materials would be stored, handled, and used in accordance with applicable regulations and with the project's hazardous materials management plan (HMMP), which would reduce the risk to human health and the environment. The HMMP would be prepared in accordance with relevant state and federal guidelines and regulations, and would include a list of the hazardous materials to be used during construction, the location(s) of such materials within the project alignment area, disposal protocols, as well as protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. Furthermore, pesticides and herbicides would not be needed during construction activities. The HMMP would be prepared by LSPGC and PG&E as required by the California Fire Code, Part 9 of Title 24 in the CCR and as part of a condition of the project submitted to the CPUC for review and approval prior to any construction activities.

Cal/OSHA also has regulations related to the use of hazardous materials during construction, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs (California Department of Industrial Relations 2023). In addition, because the project would disturb more than 1 acre of land, it also would be subject to the NPDES Construction General Permit. As described in Section 3.10, "Hydrology and Water Quality," this permit requires preparation and implementation of a SWPPP for LSPGC project components, which includes protocols for proper storage and disposal of hazardous materials.

Implementation of APMs

LSPGC APM BIO-3 would require the development and implementation of a WEAP training for construction personnel that would include the identification of potentially hazardous wastes, identification of stained and odiferous soils, and proper storage of hazardous materials. Should stained or odiferous soils be identified during construction, workers would notify the environmental manager, and contaminated media would be tested and disposed of in accordance with federal and state regulations.

Operation and Maintenance

The LSPGC project components' design specifications and operation and maintenance procedures would minimize the potential for the release of hazardous materials, specifically from the mineral oil contained in the transformers and lead-acid batteries from the Manning Substation. An SPCC Plan would be required in accordance with CFR Title 40, Parts 112.1–112.7 and would address the project spill prevention and containment design measures and practices. The Manning Substation would be constructed with secondary containment designed in accordance with SPCC requirements for oil containment in the event of a spill. Each of the seven transformers would contain approximately 25,000 gallons of mineral oil, and each transformer would have an oil containment system consisting of an impervious, lined, open, or stone-filled sump area around the transformer to capture any leaks should they occur. A concrete secondary containment basin would provide mineral oil containment for the transformer and would be designed to allow sufficient freeboard to include the oil volume of the transformer plus the precipitation from a

25-year, 24-hour storm event. Furthermore, minor drips and spills from maintenance vehicles and refueling are unlikely but can occur.

Maintenance activities would occur quarterly at the LSPGC project facilities. These activities may include use of new pollutant sources, including oils, paints, and solvents used for routine maintenance. All materials used during operation and maintenance would be applied, stored, and disposed of by licensed professionals and in accordance with applicable regulations and manufacturer recommendations. Should a release occur from a maintenance vehicle, it would be small in volume and immediately cleaned up, and the materials would be properly disposed of in accordance with federal, state, and local regulations.

PG&E Project Components

Construction

Construction of PG&E project components would require the use of hazardous materials, such as diesel fuel, gasoline, mineral oil, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, cement slurry, and chemicals associated with vehicles and construction activities. In addition, the project would include transformers containing mineral oil, which is considered a hazardous material in the state of California. However, as included in Section 2.8.11 of the Project Description all hazardous materials would be stored, handled, and used in accordance with applicable regulations, in accordance with the project's HMMP, and would thereby reduce the risk to human health and the environment. The HMMP would be prepared by LSPGC and PG&E in accordance with relevant state and federal guidelines and regulations, and the procedures would include the materials to be used, location(s) of such materials within the project area, disposal protocols, as well as protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. Furthermore, it is not anticipated that pesticides or herbicides would be needed during construction activities. The HMMP would be prepared by PG&E and LSPGC as required by the California Fire Code, Part 9 of Title 24 in the CCR and as part of a condition of the project submitted to the CPUC for review and approval prior to any construction activities.

Cal/OSHA also has regulations related to the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs (California Department of Industrial Relations 2023). In addition, because the PG&E project components would disturb more than 1 acre of land, PG&E would be subject to the NPDES Construction General Permit. As described in Section 3.10, "Hydrology and Water Quality," this permit requires preparation and implementation of a SWPPP for PG&E project components, which includes protocols for proper storage and disposal of hazardous materials.

Implementation of CMs

Implementation of PG&E CM HAZ-1 would require proper handling, storing, and disposing of hazardous materials and hazardous wastes in accordance with all applicable regulations. PG&E would implement emergency response procedures that include proper disposal of potentially contaminated soils, establishing site-specific buffers for construction vehicles and equipment near sensitive resources, reporting hazardous material spills, and stopping work and contacting the appropriate authorities if visual contamination or chemical odors are detected. Implementation of CM HAZ-2 would ensure that PG&E crews receive worker environmental awareness training on types of hazardous substances and materials and applicable regulations.

Operation and Maintenance

PG&E maintains existing transmission facilities in the vicinity of the project alignment area. PG&E maintenance activities would continue as they currently do and would not change. All materials used during operation and maintenance of the PG&E project components would be applied, stored, and disposed of by licensed professionals and in accordance with applicable regulations and manufacturer recommendations.

Conclusion

Construction and operation of the project would involve the use, storage, and transport of hazardous materials. All such activities would occur in compliance with local, state, and federal regulations. Implementation of the proposed CMs and APMs would reduce the potential for disturbance of contaminated soil or groundwater to result in a significant hazard to the public or the environment, as well require proper handling, storing, and disposing of hazardous materials and hazardous wastes in accordance with all applicable regulations. Therefore, the impact on the public and the environment from exposure to hazardous materials and other hazards during construction and operation would be **less than significant**.

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

LSPGC and PG&E Project Components

Construction

As discussed above, federal, state, and local regulations have been established to address the handling and disposal of hazardous materials during construction activities. The risk of hazardous materials release would be minimized through compliance with these regulatory requirements, which prescribe specific methods of materials characterization, handling, and disposal. Nonetheless, there is a potential for soil-disturbing activities to encounter soils that have been contaminated by damaged transformers and past agricultural practices. Disturbance of contaminated soil could result in the release of hazardous materials that could create a risk to human health or the environment.

However, there is a low potential to encounter hazardous materials during construction of the project components. Although there are no areas of documented contamination, as concluded in the Phase I ESA, the SWRCB GeoTracker database, and the DTSC EnviroStor database, past uses of the properties in the project alignment area may have generated localized areas of undocumented contamination. Therefore, there is potential for hazardous materials to be accidentally released into the environment during construction. In the case of an accidental spill during construction of the project, construction crews would maintain spill kits on-site to respond to potential releases of hazardous materials. Furthermore, LSPGC and PG&E would implement an HMMP, which would include protocols for the handling of discovered hazardous waste materials and would reduce the risk to human health and the environment. The HMMP would be prepared in accordance with relevant state and federal guidelines and regulations, and the procedures would include the materials to be used, location(s) of such materials within the project area, disposal protocols, as well as protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. The HMMP would be prepared by LSPGC and PG&E as part of a condition of the project and submitted to the CPUC for review and approval prior to any construction activities.

Implementation of APMs and CMs

LSPGC APM BIO-3 would require the development and implementation of a WEAP training for LSPGC construction personnel that would include the identification of potentially hazardous wastes, identification of stained and odiferous soils, and proper storage of hazardous materials to reduce accidental spills. Should stained or odiferous soils be identified during construction, workers would notify the environmental manager and contaminated media would be tested and disposed of in accordance with federal and state regulations.

Implementation of PG&E CM HAZ-1 would require proper handling, storing, and disposing of hazardous materials and hazardous wastes in accordance with all applicable regulations. PG&E would implement emergency response procedures that include proper disposal of potentially contaminated soils, establishing site-specific buffers for construction vehicles and equipment near sensitive resources, reporting hazardous material spills, and stopping work and contacting the appropriate authorities if visual contamination or chemical odors are detected. Implementation of CM HAZ-2 would ensure that PG&E crews receive worker environmental awareness training on types of hazardous substances and materials and applicable regulations.

As a result of the aforementioned APMs and CMs, reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be considerably minimized.

Operation and Maintenance

The LSPGC and PG&E project components' design specifications and operation and maintenance procedures would minimize the potential for the release of hazardous materials, including from the mineral oil contained in the transformers. An SPCC Plan would be required in accordance with CFR Title 40, Parts 112.1–112.7 and would address the project spill prevention and containment design measures and practices. The Manning Substation would be constructed with secondary containment design in accordance with SPCC requirements for oil containment in the event of a spill. Each of the seven transformers would contain approximately 25,000 gallons of mineral oil, and each transformer would have an oil containment system consisting of an impervious, lined, open, or stone-filled sump area around the transformer to capture any leaks should they occur. A concrete secondary containment basin would provide mineral oil containment for the transformer and would be designed to allow sufficient freeboard to include the oil volume of the transformer plus the precipitation from a 25-year, 24-hour storm event. Minor drips and spills from maintenance vehicles and refueling are unlikely but can occur. Should a release occur from a maintenance vehicle, it would be small in volume and immediately cleaned up and the materials would be properly disposed of in accordance with federal, state, and local regulations. Furthermore, PG&E maintains existing transmission facilities in the vicinity of the proposed project. PG&E maintenance activities would continue as they currently do and would not change. Should a release occur from a maintenance vehicle, it would be small in volume and immediately cleaned up.

Conclusion

Past uses of the properties in the project alignment area may have generated localized areas of undocumented contamination. Implementation of the proposed CMs and APMs and compliance with all applicable laws and regulations would require proper handling, storing, and disposing of hazardous materials and hazardous wastes in accordance with all applicable regulations, as well as ensure that crews receive worker environmental awareness training on types of hazardous substances and materials and cleanup procedures in case of an accidental spill. As a result, the impact on the public or the environment from exposure to these unknown hazardous materials and other hazards during construction, or from accidental release of hazardous materials during construction or operation of the project, 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?**

LSPGC and PG&E Project Components

As described above in Section 3.9.1, "Environmental Setting," no existing or proposed schools are located within 0.25 miles of the project alignment area. The nearest school to the project alignment area is Cantua Elementary School, located approximately 8 miles southeast of the proposed LSPGC 230 kV transmission line. Therefore, implementation of the project would not result in hazardous materials being located within 0.25 miles of existing or proposed schools. 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 §65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

LSPGC and PG&E Project Components

As described above in Section 3.9.1, "Environmental Setting," none of the LSPGC or PG&E project components would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, there is no potential to create a significant hazard to the public or the environment through exposure to existing contamination. There would be **no impact**.

- 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, or create a significant hazard to air traffic from the installation of new power lines and structures?

LSPGC and PG&E Project Components

There are no active airports located within 2 miles of the project alignment area, and the project is not within an adopted ALUCP. William Robert Johnston Municipal Airport is located approximately 11 miles northeast of the project alignment area, the San Joaquin Airport is located approximately 10 miles east of the project alignment area, and Firebaugh Airport is located approximately 18 miles north of the project alignment area. Therefore, the project would not result in a safety hazard or excessive noise for people residing on or working near the project alignment area.

Furthermore, the LSPGC and PG&E project components were screened using the FAA Notice Criteria Tool (CPUC 2024). The LSPGC and PG&E project components would be less than 200 feet above ground level and, pursuant to the FAA Notice Criteria Tool, would not pose a hazard to air navigation and would be exempt from FAA requirements. In addition, LSPGC and PG&E would coordinate with nearby airports regarding helicopter flight plans for construction and maintenance activities. Based on structure heights and the results of the FAA Notice Criteria Tool, the project would not result in hazards related to air traffic. As a result, there would be **no impact**.

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

LSPGC and PG&E Project Components

Construction

The Fresno County Master Emergency Services Plan establishes the County's incident management structure and overall operational concepts and provides a flexible platform for planning and response to hazards, incidents, events, and emergencies (Fresno County 2017). The plan does not describe or recommend specific evacuation routes within the county. The project alignment area is sparsely populated, so construction of the project would not impact the implementation of the Emergency Services Plan. In addition, emergency access would not be directly affected during construction of LSPGC and PG&E project components because streets would remain open to emergency vehicles throughout construction. Although lane closures may be required, at least one lane would remain open to provide access for emergency vehicles and evacuation. Furthermore, partial and temporary lane closures may be required along Manning Avenue for road-widening activities. However, if road closures are necessary, they would occur in accordance with regulations and would not impede emergency response. In addition, any lane closures would be temporary and short term, and these closures would be coordinated with Caltrans and Fresno County through the encroachment permit process to reduce the potential for temporary and short-term effects on emergency access, as discussed in Section 3.17, "Transportation." During an evacuation event, construction activities would allow for efficient evacuation of the public and project personnel at all times. Therefore, the project would not impair the implementation of or physically interfere with an adopted emergency response or evacuation plan.

Operation and Maintenance

Operation and maintenance activities would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Furthermore, LSPGC project components would be operated and monitored remotely, and PG&E project components would be incorporated into existing PG&E operation activities in the area. Routine maintenance of LSPGC and PG&E project components would require a small crew size and infrequent dispatch and therefore, would not impair the implementation of or physically interfere with the Fresno County Master Emergency Services Plan. Quarterly inspections of the proposed LSPGC Manning Substation would be conducted, and a small, specialized team would perform more extensive maintenance activities. Routine maintenance of the proposed LSPGC 230 kV transmission line would require approximately one trip per year by crews of one to four people. PG&E's current maintenance practices in the proposed project vicinity would remain

the same and would not change in a manner that could interfere with the Master Emergency Services Plan. Therefore, project operation and maintenance would not impair the implementation of or physically interfere with an adopted emergency response or evacuation plan.

Conclusion

Project-related activities would not result in full closure of roads during construction, which would provide access for emergency vehicles and evacuation, thus the project would not impair or physically interfere with an adopted emergency response or evacuation plan. Should road closures be necessary during road-widening activities along Manning Avenue, road closures would be limited and of short duration. In addition, temporary closures would be coordinated with Caltrans, Fresno County, and emergency service providers to ensure access for emergency vehicles is always maintained. As a result, the project would not conflict with the Fresno County Master Emergency Services Plan. The project would not interfere with an adopted emergency response or evacuation plan. This 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?**

LSPGC and PG&E Project Components

Construction

As previously discussed in Section 3.9.1, the portion of the project alignment west of I-5 would be located within a CAL FIRE FHSZ designated as moderate. The nearest high FHSZ would be located approximately 1 mile south of the project alignment area. The project would not be located in a CPUC-designated HFTD. The project alignment area is relatively flat and developed for agricultural and residential uses. The primary risk for potential fire hazards would be associated with the use of vehicles and equipment during construction that could generate heat or sparks that could ignite dry vegetation and result in a fire.

The construction of the Manning Substation and new distribution lines could increase wildfire risk above baseline conditions. With any electrified equipment, there is potential for accidental ignition of nearby vegetation, particularly during high fire hazard conditions and times of the year. However, the project alignment area is located within existing or to-be-acquired rights-of-way where vegetation has been previously or would be cleared or trimmed and is not designated very high or high FHSZ. Furthermore, vehicles and equipment would primarily use existing roads.

Based on the moderate CAL FIRE FHSZs within and surrounding the project alignment area, construction personnel could be exposed to a wildland fire during project construction. Risk to personnel would most likely come from the inability to avoid or escape a wildland fire. As discussed above, lane closures associated with the project would be limited and of short duration, and the grid layout of existing roads in the project alignment area would allow for evacuation.

Implementation of APMs and CMs

The potential for wildfires to be initiated by construction of the project would be reduced through the implementation of LSPGC APM FIRE-1 and PG&E CM FIRE-1, which requires the use of project-specific Construction Fire Prevention Plans (CFPP) for LSPGC and PG&E project components. These plans would outline procedures for fire reporting, response, and prevention, as well as crew training and coordination with federal and local fire officials. The CFPPs would be prepared by PG&E and LSPGC and submitted to the CPUC for review prior to initiation of construction. The CFPPs would be fully implemented throughout the construction period and would detail the purpose and applicability of the plan; outline the responsibilities and duties of construction personnel; require preparedness training and drills; describe procedures for fire reporting, response, and prevention; and include daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible activity. In addition, the CFPP would involve coordination procedures with federal and local fire officials, crew training, and methods for verifying that all plan protocols and requirements are being followed. A project fire marshal or similarly qualified position would be established to enforce all provisions of the CFPP and perform other duties related to fire

detection, prevention, and suppression for the project. Construction activities would be monitored to ensure implementation and effectiveness of the CFPP.

In addition, to further reduce wildland fire risk, project implementation of PG&E CM GEN-1 would require the removal of vegetation prior to construction of PG&E project components.

Operation and Maintenance

The risk for potential fire hazards associated with operation and maintenance for the project is low given that facilities are engineered and would operate according to current standards to avoid wildfire risk. In accordance with GO 95, the project would be required to maintain acceptable clearances around the Manning Substation and between the distribution lines and any nearby trees or other vegetation to minimize the risk of the energized lines igniting wildfires. As previously discussed, the project would be operated remotely and would require routine monthly operation and maintenance inspections. These activities would not involve any high fire risk activities, and operation and maintenance personnel would follow all applicable state and federal regulations. Furthermore, PG&E's operation and maintenance practices would remain consistent with operation and maintenance practices that PG&E already implements in the area. These activities would not involve any high fire risk activities, and operation and maintenance personnel would follow all applicable state and federal regulations. As a result, project facilities would not expose additional people to injury or death due to their presence in the project alignment area.

Conclusion

The project alignment area has a low to moderate risk of wildland fire based on mapping conducted by CAL FIRE and the CPUC. Implementation of CM GEN-1 would require that the project maintain acceptable clearances around the substation site and between the distribution lines and other vegetation to minimize the risk of the energized lines igniting wildfires. In addition, implementation of APM FIRE-1 and CM FIRE-1 would require compliance with LSPGC's and PG&E's CFPP and fire prevention practices to further reduce wildland fire risk in the project alignment area. This plan is discussed further in Section 3.20, "Wildfire," and outlines procedures for fire reporting, response, and prevention, as well as for crew training and coordination with federal and local fire officials. As a result, the project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fire. This impact would be **less than significant**.

h) Create a significant hazard to the public or environment through the transport of heavy materials using helicopters?

LSPGC Project Components

Construction

One to two light-duty helicopters would be used in support of construction of the LSPGC project components. Helicopter activities may include transportation of construction workers, delivery of equipment and materials to temporary construction areas, hardware installation, or installation of overhead conductor/cable. In coordination with the FAA Flight Standards District Office, LSPGC and PG&E would develop and implement a Helicopter Use and Safety Plan in accordance with Title 14, Parts 77 and 133 of the CFR, prior to project construction, and submit it to the CPUC for review and approval. Through these activities and agency coordination, LSPGC would eliminate the potential for creating a significant hazard to the public or environment through the transport of heavy materials using helicopters.

Implementation of APMs

APM HAZ-1 would require complying with all applicable FAA regulations, coordinating helicopter operation with local airports before and during construction, and managing helicopter use and landing zones. As a result, helicopter flight paths would avoid residences and other occupied areas, thereby minimizing impacts on local residents.

Operation and Maintenance

As discussed in Section 2.10.2, transmission lines would be inspected annually by routine patrols, either from the ground or by a drone/helicopter. The inspection process would involve routine patrols from existing local staff.

PG&E Project Components

Construction

PG&E's transmission line work would utilize one helicopter for the proposed PG&E 500 kV Interconnections, two helicopters for the proposed PG&E 230 kV Interconnections, one helicopter for the proposed PG&E 230 kV and 115 kV Structure Raises, and two helicopters for the proposed PG&E 230 kV Reconductoring. Helicopter activities would include transportation of construction workers, delivery of equipment and materials to temporary construction areas, hardware installation, or installation of overhead conductor/cable. In coordination with the FAA Flight Standards District Office, PG&E would develop and implement a Helicopter Use and Safety Plan in accordance with Title 14, Parts 77 and 133 of the CFR, prior to project construction, and submit it to the CPUC for review and approval.

Implementation of CMs

PG&E CM HAZ-3 would require complying with all applicable FAA regulations, coordinating helicopter operations with local airports before and during construction, and managing helicopter use and landing zones. As a result, PG&E helicopter flight paths would avoid residences and other occupied areas, thereby minimizing impacts on local residents.

Operation and Maintenance

Helicopters are occasionally used for operation and maintenance of existing PG&E facilities. Periodic vehicle or helicopter access is required to check the telecommunication facilities, replace batteries, conduct minor maintenance, or make adjustments to the facilities or project components. PG&E project components would be added to the existing PG&E maintenance activities and routes. Therefore, the PG&E project components would be subject to the same operation and maintenance activities that PG&E already conducts in the area, and no new hazards would occur.

Conclusion

Project construction would require the use of helicopters for the transportation of construction workers, equipment and materials deliveries, hardware installation, or installation of overhead conductor/cable. LSPGC and PG&E compliance with APM HAZ-1 and CM HAZ-3 would ensure adherence to all applicable FAA regulations and require coordination of helicopter operation with local airports before and during construction of the project. Furthermore, operation and maintenance of the project may also require annual inspections of transmission lines and structures and routine patrols and would comply with the Helicopter Use and Safety Plan in accordance with Title 14, Parts 77 and 133 of the CFR. Therefore, impacts on the public and environment through the transport of heavy materials using helicopters would be **less than significant**.

i) Expose workers or the public to excessive shock hazards?

LSPGC Project Components

Construction

To minimize potential exposure of the public to electric shock hazards, a 10-foot chain-link wall topped with 1-foot of barbed wire would extend around the perimeter of the proposed Manning Substation, thereby restricting site access. Only one vehicle entrance would be installed and would be gated and monitored remotely; thus, access during construction would be restricted to only authorized personnel. Warning signs would be posted around the perimeter of the stations' fences and gates to alert the public of potential electrical hazards.

The construction of LSPGC project components would comply with federal and state regulations and standards. All authorized personnel working on-site during construction would be trained according to OSHA safety standards (OSHA 2015), which are based on applicable federal, state, and local safety regulations. To reduce shock hazards and avoid electrocution of workers or the public, LSPGC would comply with the provisions found in Cal/OSHA Title 8 of the CCR, particularly the electrical health and safety regulations found in Chapter 4, Subchapter 5 in the Electrical Safety Orders, Sections 2700–2989, which are relevant to high-voltage work.

Operation and Maintenance

To minimize potential exposure of the public to electric shock hazards, the 10-foot chain-link wall topped with 1-foot of barbed wire would remain and extend around the perimeter of the proposed Manning Substation, thereby restricting site access. During operation and maintenance facilities inspections, the Manning Substation perimeter wall would be examined, and repairs would be made as necessary. The Manning Substation would be operated and monitored remotely. If equipment malfunctions, operation and maintenance personnel would be dispatched to the site to investigate the problem and take appropriate corrective action. LSPGC has qualified operations personnel that are trained to avoid and minimize arc flash situations and are provided the appropriate arc flash personal protective equipment (e.g., fire-resistant clothing, gloves, and insulated tools). Proper personal protection equipment (PPE) would be required when anyone is in the facility. LSPGC uses high-speed relay equipment that evaluates electrical fault locations and opens circuit breakers to de-energize the line in milliseconds. These established monitoring and maintenance practices would substantially reduce the potential for hazards to the public or the environment caused by a system accident or failure.

In addition, as an electric utility subject to CPUC jurisdiction, LSPGC would be required to demonstrate compliance with all applicable design standards, including GO 95, which requires that lines be inspected frequently to ensure that they are in good condition and that lines temporarily out of service be inspected and maintained to prevent a hazard, and GO 128, which is specific to the design, maintenance, and inspection of underground lines. Safety during emergencies and disasters would be ensured through compliance with GO 166 and associated investigations in the event of an outage.

PG&E Project Components

Construction

Construction of the project would include mechanisms intended to protect the public from accidents or failure of project components. The construction of PG&E project components would comply with federal and state regulations and standards. All authorized personnel working on-site during construction would be trained according to OSHA safety standards (OSHA 2015), which are based on applicable federal, state, and local safety regulations. To reduce shock hazards and avoid electrocution of workers or the public, PG&E would comply with the provisions found in Cal/OSHA Title 8 of the CCR, particularly the electrical health and safety regulations found in Chapter 4, Subchapter 5 in the Electrical Safety Orders, Sections 2700–2989, which are relevant to high-voltage work.

Operation and Maintenance

Proposed PG&E project components would involve similar hazards as the existing transmission lines already in the area. The addition of the proposed new infrastructure would only nominally change the total length of the transmission lines, and thus the additional risk, in the vicinity of the proposed project. As an electric utility subject to CPUC jurisdiction, PG&E would be required to demonstrate compliance with all applicable design standards, including GO 95, which requires that lines be inspected frequently to ensure that they are in good condition and that lines temporarily out of service be inspected and maintained to prevent a hazard, and GO 128, which is specific to the design, maintenance, and inspection of underground lines. Safety during emergencies and disasters would be ensured through compliance with GO 166 and associated investigations in the event of an outage.

Conclusion

Implementation of the project would not create other physical hazards, such as exposing workers or the public to excessive shock hazards. In addition to the training and safety standards required for authorized personnel, the project would be designed in accordance with CPUC GO 95 guidelines for safe ground clearances that are established to protect the public from electric shock. As such, impacts associated with exposure to workers and the public to excessive shock hazards would be **less than significant**.

j) Expose people to a significant risk of injury or death involving unexploded ordnance?

LSPGC and PG&E Project Components

According to the Phase I ESA and additional searches of the SWRCB GeoTracker and DTSC EnviroStor databases, no unexploded ordnance (UXO) sites are located within 1 mile of the project alignment area (DTSC 2024; SWRCB 2024). Operation and maintenance of the project would not require the use of explosives. Therefore, LSPGC and PG&E project components would not expose people to a significant risk of injury or death involving a UXO, resulting in **no impact**.

3.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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 on- or offsite erosion or siltation;	<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

HYDROLOGY AND DRAINAGE

Regional Hydrology

The proposed project is located in the San Joaquin Hydrologic Region, which is divided into three basins: the Sacramento River Basin, the San Joaquin River Basin, and the Tulare Lake Basin. The project would be located within the Tulare Lake Basin. This basin is in the south-central portion of the San Joaquin Hydrologic Region. Surface water from the Tulare Lake Basin drains north into the San Joaquin River during years of extreme rainfall. This essentially closed basin (i.e., water does not flow into the ocean) is situated in the topographic horseshoe formed by the Diablo

and Temblor Ranges to the west, the San Emigdio and Tehachapi Mountains to the south, and the Sierra Nevada to the east and southeast (CVRWQCB 2018). The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River.

The Tulare Lake Basin encompasses approximately 10.5 million acres, of which approximately 3.25 million acres are under federal ownership, including the Kings Canyon and Sequoia National Parks and substantial portions of Sierra, Sequoia, Inyo, and Los Padres National Forests. Valley floor lands make up slightly less than one-half of the total basin land area. The maximum length and width of the basin are approximately 170 miles and 140 miles, respectively. The valley floor is approximately 40 miles in width near its southern end, widening to a maximum of 90 miles near the Kaweah River (CVRWQCB 2018). The principal surface waters in the Tulare Lake Basin include the Kings, Kaweah, Tule, and Kern Rivers.

In addition, the proposed project is located within the Tumey Gulch–Fresno Slough hydrologic area within the San Joaquin Hydrologic Region. This hydrologic area is regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB). The land to the north, east, and west of the project alignment area is not developed and is primarily used for agricultural purposes.

Water Quality

There are no natural surface waters in the vicinity of the project alignment area listed as impaired by CVRWQCB. However, the California Aqueduct (Panoche Creek to Grapevine) is a designated Clean Water Act (CWA) Section 303(d)–listed waterbody due to key pollutants, including a variety of pesticides, heavy metals, and other urban and agricultural runoff. The section of the California Aqueduct crossed by the proposed PG&E 230 kV Reconductoring and proposed LSPGC 230 kV transmission line, between West Dinuba Avenue and Manning Avenue, is CWA Section 303(d)–listed for pH (SWRCB 2020).

Waterbodies

Various freshwater agricultural ponds are present within the surrounding area. An ephemeral stream is located in the western region alongside the existing Los Banos-Midway #2 500 kV transmission line and Los Banos-Gates #1 500 kV transmission line approximately 1 mile south of the proposed substation site. The open water in the project alignment area totals approximately 3.66 acres, including a portion of the California Aqueduct, the agricultural ponds, and the ephemeral drainage.

Groundwater Basin

The project alignment area is located within the Westside Subbasin of the San Joaquin Valley Groundwater Basin. The Westside Subbasin is located between the Coast Ranges to the west and the San Joaquin River drainage and Fresno Slough to the east. The subbasin is bordered on the southwest by the Pleasant Valley Subbasin, on the west by Tertiary marine sediments of the Coast Ranges, on the north and northeast by the Delta-Mendota Subbasin, and on the east and southeast by the Kings and Tulare Lake Subbasins. The Westside Subbasin is identified as a high priority subbasin under the Sustainable Groundwater Management Act (SGMA) and in a condition of critical overdraft (Westlands 2022).

Flood Conditions

The Federal Emergency Management Agency (FEMA) maps the 100-year floodplain in the United States (areas with a greater-than-1 percent annual probability of flooding). The 1-percent annual-chance flood also is referred to as the base flood or 100-year flood, and the area is labeled as a FEMA Zone A type on the flood insurance rate map (FIRM). Moderate flood hazard areas, labeled Zone B or Zone X, are the areas between the limits of the base flood and the 0.2-percent annual-chance flood (or 500-year flood). As shown in Figure 3.10-1, the central portion of the project alignment area is located within a 100-year flood zone, designated as Flood Hazard Zone AE, with a 1-percent annual chance flood hazard. The proposed substation site is not located within a flood hazard zone.

Stormwater Drainage

The proposed project alignment area and the proposed Manning Substation are located in a rural, agricultural area of Fresno County. Stormwater drainage within the proposed project alignment area and the proposed Manning Station consists of agricultural ditches. Stormwater in the project area would generally infiltrate into the subsurface and flow to the nearest agricultural ditches. No other human-made stormwater drainage facilities are located in the project alignment area.

3.10.2 Regulatory Setting

FEDERAL

Clean Water Act

The EPA is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by the EPA and states. Various elements of the CWA address water quality. These are discussed below.

CWA Water Quality Criteria/Standards

Pursuant to federal law, the EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, the State Water Resources Control Board (State Water Board) and its nine RWQCBs have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

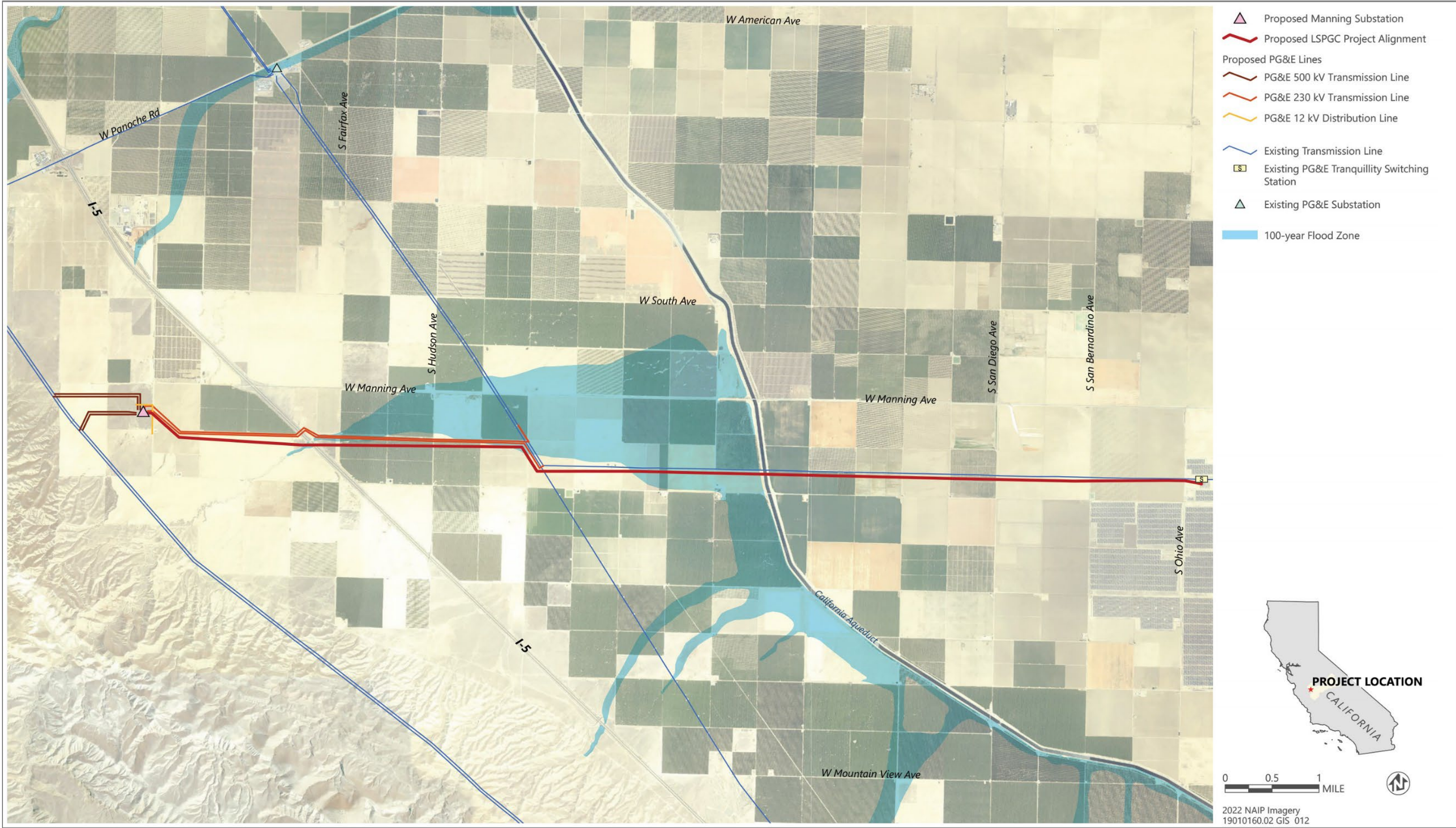
CWA Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. TMDL is the amount of the pollutant that the water body can receive and still comply with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. In California, implementation of TMDLs is achieved through water quality control plans, known as Basin Plans, of the State RWQCBs. See "State," below.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

"Nonpoint source" pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving water to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion in the "State" section below).



Source: Adapted by Ascent in 2024.

Figure 3.10-1 Flood Zone

National Flood Insurance Act

FEMA is tasked with responding to, planning for, recovering from, and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards.

FEMA prepares FIRMs that delineate the regulatory floodplain to assist local governments with the land use planning and floodplain management decisions needed to meet the requirements of NFIP. Floodplains are divided into flood hazard areas, which are areas designated per their potential for flooding, as delineated on FIRMs. Special Flood Hazard Areas are the areas identified as having a 1 percent chance of flooding each year (otherwise known as the 100-year flood). In general, the NFIP mandates that development is not to proceed within the regulatory 100-year floodplain, if the development is expected to increase flood elevation by 1 foot or more.

STATE

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater. The Porter-Cologne Act grants SWRCB and each of the nine RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Clean Water Act. The applicable RWQCB for the proposed project is CVRWQCB. SWRCB and CVRWQCB have the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil or petroleum products.

Under the Porter-Cologne Act, each RWQCB must formulate and adopt a water quality control plan (known as a "Basin Plan") for its region. The Basin Plan for the Central Valley Region includes a comprehensive list of waterbodies within the region and detailed language about the components of applicable Water Quality Objectives (WQOs). The Basin Plan recognizes natural water quality, existing and potential beneficial uses, and water quality problems associated with human activities throughout the Sacramento and San Joaquin River Basins. Through the Basin Plan, CVRWQCB executes its regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs. The Basin Plan includes both narrative and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include municipal and domestic water supply, irrigation, non-contact and contact water recreation, groundwater recharge, freshwater replenishment, hydroelectric power generation, and preservation and enhancement of wildlife, fish, and other aquatic resources.

CVRWQCB also administers the adoption of waste discharge requirements (WDRs), manages groundwater quality, and adopts projects within its boundaries under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit).

NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity

SWRCB adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than 1 acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non stormwater discharges to storm sewer systems and other waters. A SWPPP must be developed and implemented for each site covered by the permit. The SWPPP must include best management practices (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). Stormwater is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways or parking lots and can carry with it pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria and metals. The runoff can then drain directly into a local stream, lake or bay. Often, the runoff drains into storm drains which eventually drain untreated into a local waterbody.

The MS4 permitting requirements were developed in two phases: Phase I and Phase II. MS4 permits continue to be issued under Phase I or Phase II depending on the size of the MS4 seeking authorization. The project area is subject to a Phase II MS4 permit that the unincorporated Fresno County falls under (WQ Order 2013-0001-DWQ).

California Water Code

The California Water Code is enforced by the California Department of Water Resources (DWR). The mission of DWR is "to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments." DWR is responsible for promoting California's general welfare by ensuring beneficial water use and development statewide.

Groundwater Management

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030 and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1). Pursuant to SGMA, any local agency that has water supply, water management, or land use responsibilities within a groundwater basin may elect to be a "groundwater sustainability agency" for that basin (Water Code Section 10723).

Central Valley Flood Protection Act

The Central Valley Flood Protection Act of 2008 establishes the 200-year flood event as the minimum level of protection for urban and urbanizing areas. As part of the state's FloodSAFE program, those urban and urbanizing areas protected by flood control project levees must receive protection from the 200-year flood event level by 2025. DWR and the Central Valley Flood Protection Board (CVFPB) collaborated with local governments and planning agencies to prepare the 2022 Central Valley Flood Protection Plan (CVFPP) (DWR 2022), which CVFPB updated and adopted in November 2022. The objective of the CVFPP is to create a system-wide approach to flood management and protection improvements for the Central Valley and San Joaquin Valley. The Central Valley Flood Protection Act calls for updates to the CVFPP every 5 years.

State Plan of Flood Control

Section 9110(f) of the California Water Code defines the State Plan of Flood Control (SPFC) as follows: "'State Plan of Flood Control' means the state and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section 12648) of Chapter 2 of Part 6 of Division 6 for which the board or the department has provided the assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361."

The SPFC encompasses a wide network of facilities, which range from major structures such as levees, drainage pumping plants, drop structures, dams and reservoirs, and major channel improvements, to minor components such as stream gauges, pipes, and bridges.

Central Valley Water Quality Control Plan

The objective of the Central Valley Water Quality Control Plan for the Central Valley Region, the Sacramento River Basin, and the San Joaquin River Basin (RWQCB 2019) is to guide how the quality of surface and groundwaters in the region should be managed. The Basin Plan identifies various beneficial water uses and the water quality that must be maintained to allow those uses to continue. The Basin Plan also describes an implementation plan necessary to achieve the standards established in the plan and summarizes SWRCB and RWQCB plans and policies to protect water quality. CVRWQCB implements the plan by issuing and enforcing waste discharge requirements based on either state waste discharge requirements or federally delegated NPDES permits for discharges to surface water.

Water Quality Control Plan for the Tulare Lake Basin

The Basin Plan covers the Tulare Lake Basin. In an effort to preserve and enhance the region's waters, the Basin Plan establishes beneficial uses for surface and ground waters, sets narrative and numerical objectives, describes implementation programs to protect the beneficial uses of all waters in the region, and describes surveillance and monitoring activities to evaluate the effectiveness of the plan. To minimize and control adverse effects on the quality and beneficial uses of the region's ground and surface waters, the Basin Plan regulates waste discharge and reclaimed water use (CVRWQCB 2018).

To attain specified designated uses, CVRWQCB is required to identify water quality objectives for all surface and ground waters in the region. These objectives must be consistent with federal and state anti-degradation policies (40 CFR Section 131.12) and SWRCB Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California.

California Public Utilities Commission

CPUC General Order (GO) 95 regulates all aspects of design, construction and operation and maintenance of electrical distribution lines and fire safety hazards for utilities subject to CPUC jurisdiction. GO 95 includes basic minimum allowable vertical clearances of wires above railroad thoroughfares, ground, or water surfaces. Span wires must be 15 feet above the annual flood level and supply conductors and cables of 22.5 kV to 300 kV must be 25 feet above the annual flood level for public safety and water quality protection purposes (CPUC 2020).

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024) contains the following policies that are relevant to the project:

- ▶ **Policy OS-A.18:** 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.20:** 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.21:** 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.24:** In areas with increased potential for groundwater degradation (e.g., areas with prime percolation capabilities, coarse soils, and/or shallow groundwater), the County shall only approve land uses with low risk of degrading groundwater.
 - ▶ **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-E.5:** The County shall only approve land use-related projects that will not render inoperative any existing canal, encroach upon natural channels, and/or restrict natural channels in such a way as to increase potential flooding damage.
 - ▶ **Policy PF-E.6:** The County shall require that drainage facilities be installed concurrently with and as a condition of development activity to ensure the protection of the new improvements as well as existing development that might exist within the watershed.
 - ▶ **Policy PF-E.7:** The County shall require new development to pay its fair share of the costs of Fresno County storm drainage and flood control improvements within unincorporated areas.
 - ▶ **Policy PF-E.9:** The County shall require new development to provide protection from the 100-year flood as a minimum.
 - ▶ **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.

3.10.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to hydrology and water quality.

LSPGC APMs

- ▶ **APM BIO-3: Worker's Environmental Awareness Program.** A WEAP will be designed, implemented, and provided to all project personnel, including construction supervisors and field personnel, prior to personnel commencing work on the project. The WEAP will inform all construction personnel of the resource protection and avoidance measures, as well as procedures to be followed upon the discovery of environmental resources. Additionally, the WEAP will train all construction personnel on hazardous materials management, hazardous wastes and stained or odiferous soils identification, and applicable regulations. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:
 - A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to environmental and biological resource protection;
 - Training on how to identify sensitive or special-status biological resources, environmentally sensitive area boundaries, housekeeping (i.e., trash and equipment cleaning), safety, work stoppage, and communication protocol;
 - A discussion of procedures to be followed in the event that unanticipated sensitive or special-status biological resources are discovered during implementation of the Proposed Project;
 - A discussion of disciplinary and other actions that could be taken against persons violating environmental and biological resource protection laws and applicant policies;
 - Training on the handling, storage, and disposal of hazardous materials and wastes in accordance with applicable regulations;
 - Training on the identification of potentially hazardous wastes and stained or odiferous soils; and
 - A statement by the construction company or applicable employer agreeing to abide by the WEAP and other applicable laws and regulations.
 - The WEAP will be submitted to and approved by the CPUC prior to construction.
- ▶ **APM GEO-1: Geological Hazards and Disturbance to Soils.** The following measures will be implemented during construction to minimize impacts from geological hazards and disturbance to soils:
 - Keep vehicles 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 6 inches or to the actual depth if shallower (as identified in a site-specific geotechnical investigation report) to avoid the 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 temporarily disturbed areas. Recontour temporarily disturbed areas following construction to match pre-construction grades. Site and manage on-site material storage in accordance with all required permits and approvals.
 - Keep vegetation removal and soil disturbance to a minimum and limited to only the areas needed for construction. Dispose of removed vegetation off site at an appropriate licensed facility, or it can be chipped on site to be used as mulch during restoration.

PG&E CMs

- ▶ **CM GEN-1: Standard Construction Practices.** The following standard construction practices will be implemented, as feasible, to reduce the potential for environmental impacts.

- Vehicle parking: vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
 - Work hours: work will occur only during daylight hours, unless required to occur at night due to line clearances for worker safety.
 - Vehicle access: the development of new access and right-of-way (ROW) roads will be minimized, and clearing vegetation and blading for temporary vehicle access will be avoided to the extent practicable.
 - Speed limit: vehicles will not exceed a speed limit of 15 miles per hour (mph) in the ROWs or on unpaved roads within sensitive land-cover types.
 - Restoration and erosion control: on completion of any proposed project component, all areas that are significantly disturbed and not necessary for future operations, shall be stabilized to resist erosion, and revegetated and recontoured if necessary, to promote restoration of the area to pre-disturbance conditions.
 - Dead or injured listed species: personnel will be required to report any accidental death or injury of a listed species or the finding of any dead or injured listed species to a qualified Biologist. Notification of the California Department of Fish and Wildlife (CDFW) and/or United States Fish and Wildlife Service (USFWS) of any accidental death or injury of a listed species shall be done in accordance with standard reporting procedures.
 - Staging Area Maintenance: Work sites will be maintained in a clean and orderly state.
 - Environmentally Sensitive Areas: Biological field surveys will be performed for areas not yet surveyed. Sensitive biological resources or areas discovered during surveys may be subject to a buffer from construction activities.
 - Aquatic resources: All aquatic resources will be clearly marked prior to construction within the work areas. If deemed necessary by lead biologist, a buffer from construction activities might be established around these areas.
 - Vegetation: Vegetation and tree removal will be limited to the minimum area necessary to allow construction to proceed and to meet operational requirements.
 - Trapped Animals: All excavated holes/trenches that are not filled at the end of the workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife.
 - Delineation of Work Areas: Work areas will be clearly delineated prior to construction commencing with fencing, staking, or flags.
- **CM HAZ-1: Hazardous-Substance Control and Emergency Response.** PG&E will implement standard hazardous substance control and emergency response procedures to ensure the safety of the public and site workers during construction. The procedures identify methods and techniques to minimize the exposure of the public and site workers to potentially hazardous materials during all phases of project construction through operation. They address worker training appropriate to the site worker's role in hazardous substance control and emergency response. The procedures also require implementing appropriate control methods and approved containment and spill-control practices for construction and materials stored on-site. If it is necessary to store chemicals on-site, they will be managed in accordance with all applicable regulations. Material safety data sheets will be maintained and kept available on-site, as applicable.

Project construction will involve soil surface blading/leveling, excavation of up to several feet, and auguring to a maximum depth of 35 feet in some areas. 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 will be tested, and if contaminated above hazardous waste levels, will be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.

All hazardous materials and hazardous wastes will be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. The hazardous substance control and emergency response procedures include, but are not limited to, the following:

- Proper disposal of potentially contaminated soils.
 - Establishing site-specific buffers for construction vehicles and equipment located near sensitive resources.
 - Emergency response and reporting procedures to address hazardous material spills.
 - Stopping work at that location and contacting the County Fire Department Hazardous Materials Unit immediately if visual contamination or chemical odors are detected. Work will be resumed at this location after any necessary consultation and approval by the Hazardous Materials Unit.
- **CM HAZ-2: Worker Environmental Awareness.** The training will include the following components related to hazards and hazardous materials:
- PG&E Health, Safety, and Environmental expectations and management structure.
 - Applicable regulations.
 - Summary of the hazardous substances and materials that may be handled and/or to which workers may be exposed.
 - Summary of the primary workplace hazards to which workers may be exposed.
 - Overview of the controls identified in the SWPPP.

3.10.4 Discussion

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

LSPGC and PG&E Project Components

Construction

During construction, soil-disturbing activities, such as excavation, earth moving, grading, and trenching, would occur. These activities would require the use of pollutants, such as diesel fuel, hydraulic fluid, oils, grease, and concrete. Pollutants and disturbed soils could be mobilized and transported off-site by stormwater runoff or in the event of spills or leaching, potentially degrading the water quality in surface drainages or groundwater. Because construction of both LSPGC and PG&E project components would involve soil disturbance of more than 1 acre of land surface, a Construction General Permit would be required for the project. LSPGC and PG&E would be required to conform with the regulations, standards, and other requirements of the Construction General Permit, including the implementation of SWPPPs and associated BMPs to limit erosion, siltation, run-on, and runoff from the project alignment area. Typical BMPs would include installation of filter fences, fiber rolls, and erosion control blankets to prevent erosion and sedimentation. Pursuant to the SWPPPs, BMPs would remain in place and would be maintained until new vegetation is established. In addition, as part of the project, LSPGC would prepare a Hazardous Materials Management Plan (HMMP), and the HMMP would be submitted to the CPUC for review and approval prior to any construction activities. As discussed in Section 2.8.11, "Hazardous Materials and Management," the HMMP would require all hazardous materials to be stored, handled, and used in accordance with applicable regulations, thereby reducing impacts on water quality through control of pollutants during construction.

Operation and Maintenance

Operation and maintenance activities may include the use of materials that have the potential to contribute new pollutant sources, including, but not limited to oils, paints, and solvents. All materials would be applied, stored, and disposed of with appropriate containment in a manner consistent with manufacturer recommendations by licensed

professionals. The disturbed area would be restored to pre-disturbance conditions to resist erosion. No additional ground disturbance would occur during operation and maintenance, and the project does not include any planned or routine discharges of potential water pollutants. Therefore, operation of the project would not violate any water quality standards or waste discharge requirements, nor would it otherwise substantially degrade surface water or groundwater quality.

Implementation of APMs and CMs

Pursuant to LSPGC APM BIO-3, the WEAP will include hazardous materials management training, which would reduce the potential risk of a hazardous materials spill and prevent hazardous materials from entering waterbodies or groundwater. APM GEO-1 would require topsoil materials to be contained in the immediate vicinity of the temporary disturbance area and require on-site material storage in accordance with all required permits and approvals, which would reduce the potential for off-site erosion. Implementation of PG&E CM HAZ-1 would require proper handling, storing, and disposing of hazardous materials and hazardous wastes in accordance with all applicable regulations. PG&E would implement emergency response procedures that include proper disposal of potentially contaminated soils, establishing site-specific buffers for construction vehicles and equipment near sensitive resources, reporting hazardous material spills, and stopping work and contacting the appropriate authorities if visual contamination or chemical odors are detected. Implementation of CM HAZ-2 would ensure that PG&E crews receive worker environmental awareness training on types of hazardous substances and materials and applicable regulations. Implementation of PG&E CM HAZ-1 and CM HAZ-2 would prevent inadvertent releases of potentially toxic substances during construction and operation and would ensure the protection of water quality. Implementation of PG&E CM GEN-1 would require restoring disturbed areas to pre-disturbance conditions after construction, which would prevent off-site erosion. Restoration and erosion control would prevent erosion and other pollutants from being discharged from the project alignment area and entering waterbodies or groundwater during operation and maintenance of the proposed PG&E project components. Implementation of these APMs and CMs in accordance with applicable regulations would minimize the risk of a release of hazardous substances and any associated degradation of water quality.

Conclusion

Construction activities would result in ground disturbance and would require the use of pollutants. Ground disturbance and the use of pollutants during construction would have the potential to impact water quality if disturbed soils and pollutants are transported by stormwater runoff to nearby water bodies or groundwater. Additionally, operation and maintenance activities could include the use of pollutants. All activities that pose a risk to water quality would occur in compliance with the Construction General Permit, which would require implementation of a SWPPP and associated BMPs. In addition, implementation of the proposed APMs and CMs as part of the proposed project would require proper handling, storing, and disposing of hazardous materials and hazardous wastes in accordance with all applicable regulations, further minimizing the potential for water quality degradation. Therefore, the project would not violate water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality during construction and operation and maintenance. This impact 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?**

LSPGC and PG&E Project Components

Construction of the project would require the use of water for fugitive dust control. In addition, decommissioning could utilize water resources for dust control. Water required for project construction and decommissioning would be supplied from several sources, including Westlands or other privately owned sources. The estimated total water needs during project construction for dust control is 20 million gallons. Decommissioning is estimated to have a similar or reduced total water need. Operation and maintenance of the project would not require water use. When as needed maintenance activities occur, personnel would be responsible for providing their own drinking water. Water

may be used occasionally for cleaning conductors and equipment during as needed maintenance activities, which would be negligible. As discussed in Section 3.19, "Utilities and Service Systems," Westlands' water supplies consist of Central Valley Project (CVP) contracted water and groundwater. Westlands has an entitlement of 1,195,000 acre-feet (AF) of water supply from the CVP. The proposed project is within the Westside Subbasin, which has a projected sustainable yield of 294,000 acre-feet per year (AFY) of groundwater. The estimated 20 million gallons (approximately 61.4 AF) of water would be from the CVP water supply and/or groundwater. There would be sufficient water supplies available to serve the project during construction and decommissioning. Even if the anticipated water demands for construction and decommissioning were only sourced from groundwater, the demands would represent a small fraction of the sustainable yield of the Westside Subbasin. The proposed project would not substantially decrease groundwater supplies.

As described in Section 2.8.10, "Water Use and Dewatering," if groundwater is encountered during construction, excavations would be dewatered using one or more pumps, and the water would be either discharged on-site to the surface, if permitted, or stored in Baker tanks or similar equipment within staging areas prior to disposal off-site. Baker tanks or similar equipment would be placed on the temporary work area established for new structure installation. Dewatering activities would occur in areas with shallow water tables and would be temporary, which would not substantially decrease groundwater supplies.

Most of the substation site would be covered by gravel, which would allow percolation of water into the ground. Only the foundations, buildings, and paved driveways and access roadways would reduce the surface area for groundwater recharge. These areas would total approximately 14 acres. A proposed detention basin would be located at the northeast corner of the substation site. The proposed substation pad would be graded to drain stormwater to a perimeter drainage system that would help facilitate drainage to the substation detention basin. The detention basin would then facilitate the return of water captured on-site to the groundwater basin. As such, the project would not interfere substantially with groundwater recharge during operation and maintenance.

As discussed above, there would be sufficient water supplies to serve the project during construction and decommissioning. Construction activities would have the potential to require dewatering in areas with shallow water tables. However, dewatering would be temporary, and water would be discharged on-site to the surface, if permitted. Temporary dewatering activities would not substantially decrease groundwater supplies. Once constructed, the Manning Substation would result in 14 acres of impervious surface or compact soils, which would not interfere with groundwater recharge because water from these impervious surfaces would drain to the new detention basin that would retain stormwater and allow percolation of water into the ground. Therefore, implementation of the project would not decrease groundwater supply or interfere substantially with groundwater recharge during operation and maintenance. This impact 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 would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; 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 impede or redirect flood flows?**

LSPGC and PG&E Project Components

Construction

Existing stormwater drainage within the proposed project alignment area and the proposed Manning Substation consists of agricultural ditches. Stormwater would generally infiltrate into the subsurface and flow to the nearest agricultural ditches. No other human-made drainage facilities are located in the project alignment area. There are no surface waters that would be altered by the project. As discussed in item "b" above, the project would result in approximately 14 acres of impervious surface/compacted soils at the proposed substation site. The project would be constructed on relatively level surfaces with minimal topographic variation. Drainage on the substation site would be

designed to be collected and channeled to a detention basin where it would be allowed to percolate into the ground. Therefore, drainage from the substation site would not exceed capacity of existing drainage systems or impede flood flows. Limited grading would be required along the transmission line alignments for access to transmission structure locations. Vegetation removal would be required at the proposed substation site and areas along the access roads and transmission structure sites. With the substation site graded to drainage stormwater to the on-site drainage system and the implementation of the LSPGC SWPPP, substantial erosion is would not occur. Likewise, the project transmission line features would not impede flood flows because the project has been designed to allow flow through or around project features. As shown in Figure 3.10-1, the substation site is not located within a 100-year FEMA floodplain.

Operation and Maintenance

Operation and maintenance of the proposed transmission lines would not involve any activities that would alter drainage patterns or increase impervious surfaces. At the substation site, the proposed substation pad would be graded to drain stormwater to a perimeter drainage system that would then drain to the substation detention basin and allow infiltration of the volume of runoff generated by the facility during a storm event. The detention basin would be constructed to maintain drainage and stormwater runoff. Overland flows onto the station facilities are not expected given the relatively flat terrain.

Implementation of APMs and CMs

LSPGC APM GEO-1 would address unstable soils by requiring measures implemented during construction of LSPGC project components to address disturbed soils that may increase erosion or siltation during a storm event along the project alignment area. APM GEO-1 would include avoiding topsoil salvage in saturated soils to maintain soil structure; recontouring temporarily disturbed areas following construction to match pre-construction grades; and keeping soil disturbance to a minimum, which would reduce the risk of increasing erosion and siltation impacts along the project alignment. Implementation of CM HAZ-2 would provide training to PG&E construction crews regarding the BMPs identified in the SWPPP to ensure erosion and sedimentation BMPs are properly implemented during construction to prevent on- or off-site erosion. PG&E CM GEN-1 would require the disturbed areas to be revegetated or recontoured to promote restoration of the area to pre-disturbance conditions. Implementation of CM GEN-1 would ensure the existing drainage patterns would be maintained along the PG&E project alignment area, and the disturbed areas would be stabilized to resist erosion during operation and maintenance.

Conclusion

Although project construction would include temporary disturbance areas, the project would not change the drainage pattern of the area. The project would be required to comply with the NPDES Construction General Permit, which would include BMPs to prevent substantial erosion, flooding, and excessive runoff during project construction. In addition, implementation of APM GEO-1, CM HAZ-2, and CM GEN-1 would require appropriate soil management, construction worker training regarding the SWPPP BMPs, and restoring of disturbed areas to pre-construction conditions. Implementation of the APM and CMs would minimize erosion and siltation during construction and operation. Although the proposed Manning Substation would result in new impervious surface/compact soils, the site is not in a mapped flood zone nor is it traversed by any streams and therefore would not impede or redirect flood flows. In addition, the proposed detention basin within the substation would ensure stormwater runoff would be retained for percolation, which would ensure that on- and off-site erosion would not occur during operation and maintenance. This impact would be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

LSPGC and PG&E Project Components

The proposed project components are inland, and the substation site is over 83 miles from the California coast and therefore not in a location susceptible to tsunami hazards. As discussed in Section 3.10.1, there are no large bodies of water located near the project alignment area. As shown in Figure 3.10-1, the proposed LSPGC 230 kV transmission

line, and the proposed PG&E transmission lines are located within a 100-year FEMA floodplain. However, these transmission lines would be overhead lines that would not be affected by project inundation. The other project components are in locations identified by FEMA as Zone X, defined as a zone of minimal flood hazard (FEMA 2024), including the substation site. Because the project would not be located in the Coastal Zone, 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. **No impact** would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

LSPGC and PG&E Project Components

As discussed in item "a" above, implementation of the project would not violate water quality standards or waste discharge requirements during construction and operation and maintenance with implementation of the SWPPP and associated BMPs and proposed APMs and CMs. Therefore, the project would not conflict with or obstruct implementation of the CVRWQCB Basin Plan related to maintaining water quality objectives. The project alignment area is located within the Westlands Subbasin, which is identified as a high priority subbasin under the SGMA. The Westside Subbasin Groundwater Sustainability Plan (GSP) is the applicable sustainable groundwater management plan. As discussed in item "b" above, implementation of the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharges. Therefore, the project would not conflict with or obstruct implementation of a sustainable groundwater management plan. This impact would be **less than significant**.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>

3.11.1 Environmental Setting

PROJECT ALIGNMENT

The project alignment area is located in western unincorporated Fresno County, east of the Tumey Hills recreation area, and south of Manning Avenue. The eastern terminus of the project is approximately 12 miles west of the City of San Joaquin. The proposed Manning Substation would be located on a 40-acre site approximately 0.85 miles southwest of the Interstate 5 (I-5) and Manning Avenue interchange, and approximately 1.5 miles east of the Tumey Hills recreation area. The project alignment area is located predominantly within lands used for agricultural purposes.

LAND USE DESIGNATIONS AND ZONING

Land Use Designations

The Fresno County General Plan (Fresno County 2000) specifically designates the following land use in the project alignment area:

- **Agriculture.** This designation provides for the production of crops and livestock, and for the location of necessary agriculture commercial centers, agricultural processing facilities, and certain nonagricultural activities.

Zoning

The Fresno County Zoning Ordinance establishes development standards and other general provisions to ensure consistency between general plan land use designations and proposed development projects. Consistent with the Fresno County Zoning Map, the entire portion of the project alignment area is zoned as Exclusive Agricultural (AE-20 and AE-40) (Fresno County 2024). Under the County’s Land Use Code, major utility infrastructure is permitted on lands designated for Exclusive Agricultural uses in unincorporated Fresno County, subject to site approval.

SURROUNDING LAND USES

Lands in the vicinity of the project alignment are used for agricultural and rural residential purposes. Within 0.5 miles of the project alignment area, land is used primarily for agricultural uses and various rural residential developments that are present throughout the landscape.

3.11.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to land use are applicable to the project.

STATE

State Planning and Zoning Laws

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. Cities typically identify a "sphere of influence" in their general plans; these are areas outside the city corporate boundaries that make up the probable future service area of the city. The general plan addresses a broad range of topics, including at a minimum land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses in a specific zone district, are required to be consistent with the general plan. Local general plan policies and zoning ordinances, as they relate to the project, are summarized below.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

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. However, local plans and policies are considered for informational purposes. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits.

Fresno County General Plan

The Fresno County Agriculture and Land Use Element (Fresno County 2000) includes goals and policies designed to establish zones for the various agricultural and land uses in the county. The following policy from the General Plan is relevant to the project:

- **Policy PF-J.2:** The County shall work with local gas and electric utility companies to design and locate appropriate expansion of gas and electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual, and other impacts on existing and future residents.

Fresno County Zoning Ordinance

The Fresno County Zoning Ordinance establishes zoning districts that are applied to property in unincorporated Fresno County, determines how the zoning districts are applied on the County's zoning maps, and provides general permit requirements for development and new land uses in the unincorporated areas of the county. Under the County's Zoning Ordinance, the unincorporated areas of Fresno County are divided into zoning districts that consistently implement the General Plan and any applicable community and specific plans. Under the Zoning Ordinance, major utility infrastructure is permitted on lands zoned for Exclusive Agricultural uses in the unincorporated county subject to site approval.

3.11.3 Applicant-Proposed Measures and PG&E Construction Measures

There are no applicable applicant-proposed measures (APMs) or PG&E construction measures (CMs) relevant to land use and planning proposed as part of the project.

3.11.4 Discussion

a) Physically divide an established community?

LSPGC and PG&E Project Components

The project would include the construction, operation, and maintenance of the new Manning Substation, overhead transmission lines, and associated infrastructure to better serve the energy needs of the growing population in unincorporated Fresno County. There are no established communities in the vicinity of the project alignment area as the project would be located entirely in a rural agricultural area of the unincorporated county. The route has been designed with consideration to existing linear features and parcel lines to minimize effects on land use, and the overhead lines would not prohibit travel beneath the lines or disrupt visual continuity. Therefore, the construction, operation, and maintenance of the project would not create a barrier that would physically divide the existing agricultural area in the unincorporated county. There would be **no impact**.

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?

LSPGC and PG&E Project Components

The project alignment area would be located within lands designated for agricultural uses and zoned for Exclusive Agricultural. Because the CPUC has regulatory authority over the project, the project would not be under the jurisdiction of Fresno County and, therefore, is not subject to local agency regulations. Nonetheless, major utility infrastructure is permitted on parcels zoned for Exclusive Agriculture uses in the unincorporated county subject to approval by the Fresno County director of the Department of Public Works and Planning pursuant to Section 816.2 of the Zoning Ordinance. The Director must make the following findings for a utility project to be consistent with the Zoning Code:

- ▶ The site of the proposed use is adequate in size and shape to accommodate the use of all yards, spaces, walls and fences, parking, loading, landscaping, and other features required by the proposed use;
- ▶ The site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use;
- ▶ The proposed use will not be detrimental to the character of development in the immediate neighborhood; and
- ▶ The proposed development is consistent with the Fresno County General Plan.

As discussed in Chapter 2, "Project Description," the substation site is adequate in size and shape to accommodate all necessary features for the Manning Substation. The project would develop similar electric utility infrastructure in the vicinity of existing electrical infrastructure and would not be detrimental to the character of development in the immediate neighborhood. As discussed in Section 3.17, "Transportation," the project would add minimal traffic to the roadway network, and existing roadways would be adequate to serve the project. As discussed throughout this IS/MND, the project would be consistent with the Fresno County General Plan as it would minimize impacts on visual resources (Section 3.1, "Aesthetics"); minimize impacts on agricultural resources (Section 3.2, "Agriculture and Forestry Resources"); protect biological and cultural resources (Section 3.4, "Biological Resources," and Section 3.5, "Cultural Resources"); be consistent with noise provisions of the General Plan (Section 3.13, "Noise"); and improve electrical service to the surrounding area. No changes in land use or zoning would be required as part of the project. Therefore, the project components are consistent with the zoning and land use policies in Fresno County. Neither the LSPGC or PG&E project components would conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As a result, the impact would be **less than significant**.

3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>

3.12.1 Environmental Setting

The California Department of Conservation Division of Mines and Geology developed guidelines for the classification and designation of mineral lands, known as Mineral Resource Zones (MRZs), and retains publications of the Surface Mining and Reclamation Act Mineral Land Classification Project dealing with mineral resources in California.

MRZ-2 lands are areas where adequate information indicates that significant mineral deposits are present or are highly likely to be found. MRZ-2 lands containing aggregate and petroleum resources are present in Fresno County along the San Joaquin and Kings rivers (Fresno County 2000). Extracted mineral resources along the San Joaquin and Kings rivers include aggregate products (e.g., sand and gravel); fossil fuels (e.g., oil and coal); metals (e.g., chromite, copper, gold, mercury, and tungsten); and other minerals like asbestos, high-grade clay, diatomite, granite, gypsum, and limestone.

The project alignment would not be located within MRZ-designated lands. The project alignment area would be located over 40 miles southwest of the nearest MRZ-2 lands around the San Joaquin River, and no active mines or oil wells would be located within 10 miles of the project alignment (Fresno County 2000).

3.12.2 Regulatory Setting

FEDERAL

There are no federal plans, policies, regulations, or laws related to land use and planning applicable to the project.

STATE

California Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act of 1975 requires the state geologist to classify land into MRZs according to the known or inferred mineral potential of the land (Public Resource Code [PRC] Sections 2710–2796). The following MRZ categories are used by the state geologist in classifying the state's lands:

- ▶ **MRZ-1:** Areas where adequate geologic information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. This zone is applied where well-developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is small to none.

- ▶ **MRZ-2a:** Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.
- ▶ **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exists or where there is an exposure of mineralization of economic importance.
- ▶ **MRZ-3a:** Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of an MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.
- ▶ **MRZ-3b:** Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ-3b represents areas in geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An example of an MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure, which indicates the possible presence of a mineral deposit or that an ore-forming process was operative.
- ▶ **MRZ-4:** Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

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. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County Open Space and Conservation Element (Fresno County 2000) includes goals and policies that aim to promote the sustainable use of mineral resources in the county. The following policies from the General Plan are relevant to the project:

- ▶ **Policy OS-C.1:** The County shall not permit incompatible land uses within the impact area of existing or potential surface mining areas.
- ▶ **Policy OS-S.2:** The County shall not permit land uses incompatible with mineral resource recovery within areas designated as Mineral Resource Zone 2 (MRZ-2).
- ▶ **Policy OS-C.10:** The County shall not permit land uses that threaten the future availability of mineral resources or preclude future extraction of those resources.

3.12.3 Applicant-Proposed Measures and PG&E Construction Measures

There are no applicable applicant-proposed measures (APMs) or PG&E construction measures (CMs) relevant to mineral resources.

3.12.4 Discussion

- 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?**

LSPGC and PG&E Project Components

As discussed in Section 3.12.1, the project would not be located within MRZ-designated lands. The project alignment area would be located more than 40 miles southwest of the nearest MRZ-2 lands around the San Joaquin River, and no active mines or oil wells would be located within 10 miles of the project alignment (Fresno County 2024). Therefore, neither the PG&E nor LSPGC project components would be located on lands with any identified mineral resources that are of value to the state, region, or surrounding community. Neither PG&E nor LSPGC project components would result in the loss of availability of any known mineral resources. Therefore, there would be **no impact**.

- 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?**

LSPGC and PG&E Project Components

As explained in Section 3.12.1, the project would not be located within MRZ-designated lands. The project alignment area would be located more than 40 miles southwest of the nearest MRZ-2 lands around the San Joaquin River, and no active mines or oil wells would be located within 10 miles of the project alignment (Fresno County 2000). As such, the project would not be located on, or in proximity to, any mineral resource recovery sites identified in the Fresno County General Plan or any other land use plans provided by the County. There would be **no impact**.

3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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, or a substantial temporary or permanent increase in noise levels above existing ambient levels that could result in an adverse effect on humans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

3.13.1 Environmental Setting

ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting for the project, background information about sound, noise, vibration, and common noise descriptors is presented to provide context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound. In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 hertz (Hz) and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of A-weighted decibels, or dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels.

Human Response to Changes in Noise Levels

The doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013a:2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013b:2-10). Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

Corona Noise

Under certain conditions, the localized electric field near an energized conductor can be sufficiently concentrated to produce a tiny electric discharge, known as corona, that can ionize air close to the conductors. Corona is the physical manifestation of energy loss and can transform discharge energy into very small amounts of sound, radio noise, heat, and chemical reactions of the air components. Several factors, including conductor voltage, shape and diameter, and surface irregularities such as scratches, nicks, dust, or water drops, can affect a conductor’s electrical surface gradient and its corona performance.

Transmission lines can generate a small amount of sound energy during corona activity. This audible noise from the line can barely be heard in fair weather conditions on higher voltage lines. During wet weather conditions (such as rain or fog), water drops collect on the conductor and increase corona activity so that a crackling or humming sound

may be heard near the line. This noise is caused by small electrical discharges from the water drops. However, during heavy rain, the ambient noise generated by the falling raindrops will typically be greater than the noise generated by corona. Corona noise is generally more noticeable on high-voltage lines and does not generate noticeable noise for power lines rated at 230 kV and lower. Audible noise levels on typical 230 kV lines are very low and are usually not noticeable. For example, the calculated rainy weather audible noise for a 230 kV transmission line is about 25 dBA, which is less than the ambient noise levels in a library, and less than the background noise levels for rain and wind (CPUC 1999).

Common Noise Descriptors

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this section.

- ▶ **Equivalent Continuous Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013b: 2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq} , is the energy average of sound levels occurring during a 1-hour period.
- ▶ **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013b: 2-48; FTA 2018: 207–208).
- ▶ **Community Noise Equivalent Level (CNEL):** Similar to L_{dn} with an additional penalty of 4.77 dBA (A-weighted decibels), for the hours 7:00 p.m. to 10:00 p.m., which are usually reserved for relaxation, television, reading, and conversation (Caltrans 2013a: 2-48).
- ▶ **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB “penalty” applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m. (Caltrans 2013a: 2-48; FTA 2018: 214).

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which a noise level decreases with distance depends on the following factors.

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For point sources, this results in an overall drop-off rate of up to 7.5 dB per doubling of distance. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013b: 2-41). Barriers higher than the line of sight provide increased noise reduction. Using FHWA's highway noise abatement guidelines, it is "simple" to achieve a 5 dBA reduction, "attainable to achieve a 10 dBA reduction, "very difficult" to achieve a 15 dBA reduction, and "nearly impossible" to achieve a 20 dBA reduction from a noise barrier (FHWA 2010). A 10 dBA reduction is considered typical in practice. Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation.

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Ground-borne vibration is vibration of and through the ground. Ground-borne vibration can range from levels that are imperceptible by humans to levels that can create substantial damage to buildings and structures. Sources of ground-borne vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions).

Ground-borne vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2018: 110; Caltrans 2013b: 6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. The human body responds to average vibration amplitude and the RMS of a signal is the average of the squared amplitude of the signal. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2018: 110, 199; Caltrans 2013a: 7). Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018: 120; Caltrans 2013a: 27).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018:113).

Ground vibration levels generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

The Federal Transit Administration (FTA) Division of Environmental Analysis developed the Transit Noise and Vibration Impact Assessment Manual, which provides guidance to engineers, planners, and consultants in assessing vibration from construction, operation, and maintenance of projects. To address the human response to ground

vibration, the FTA has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented below in Table 3.13-1. In addition, the FTA has also established construction vibration damage criteria, shown below in Table 3.13-2.

Table 3.13-1 Ground-Borne Vibration Impact Criteria for General Assessment for Human Response

Land Use Category	Ground-Borne Vibration Impact Levels for Human Response (VdB re 1 microinch/second) Frequent Events ¹	Ground-Borne Vibration Impact Levels for Human Response (VdB re 1 microinch/second) Occasional Events ²	Ground-Borne Vibration Impact Levels for Human Response (VdB re 1 microinch/second) Infrequent Events ³
<i>Category 1:</i> Buildings where vibration would interfere with interior operations.	65 ⁴	65 ⁴	65 ⁴
<i>Category 2:</i> Residences and buildings where people normally sleep.	72	75	80
<i>Category 3:</i> Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB re 1 microinch/second = vibration decibels referenced to 1 microinch/second and based on the root mean square (RMS) velocity amplitude.

¹ "Frequent Events" is defined as more than 70 vibration events of the same source per day.

² "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

³ "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

⁴ This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018: 123–126.

Table 3.13-2 FTA Construction Damage Vibration Criteria

Land Use Category	PPV, in/sec
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Source: FTA 2018.

EXISTING NOISE ENVIRONMENT

Existing Noise- and Vibration- Sensitive Land Uses

Noise-sensitive land uses are considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Residential land uses are also considered vibration-sensitive land uses, as are commercial and industrial buildings where vibration would interfere with operations within the building.

The nearest noise-sensitive receptor to the proposed Manning Substation is the single-family residence located approximately 3,400 feet northeast of the substation site boundary where construction would occur; this residence is shown as sensitive receptor 1 (R1) in Figure 3.13-1. The nearest sensitive receptor to the LSPGC 230 kV transmission line would be residences approximately 1,090 feet south (R2) and 190 feet north (R3) of the proposed alignment as shown in Figure 3.13-1. The PG&E 230 kV Reconductoring would parallel the LSPGC 230 kV transmission line; R2 would be located approximately 1,120 feet south and R3 would be located 90 feet north of the reconductoring. The PG&E Panoche Substation Interconnection Modifications would be located 662 feet south of the existing single-family residence (R4).



Source: Adapted by Ascent in 2024.

Figure 3.13-1 Noise Measurement Locations and Sensitive Receptors

Airports and Airstrips

There are no airports or airstrips near the proposed project alignment. William Robert Johnston Municipal Airport is located approximately 11 miles northeast of the project alignment area, the San Joaquin Airport is located approximately 10 miles east of the project alignment area, and Firebaugh Airport is located approximately 17 miles north of the project alignment area. The proposed project alignment is not within the land use compatibility zones of any airport.

Existing Noise Survey and Ambient Levels

To characterize the existing ambient noise environment at the project site, short-term (1-hour durations) ambient noise level measurements were conducted by Arcadis within 200 feet of the proposed LSPGC 230 kV transmission line near the intersection of Dinuba Avenue and Douglas Avenue (NM 1), approximately 730 feet west of a single-family residence (R1) (Figure 3.13-1) (Arcadis 2023). The short-term measurement was taken during the daytime and during evening hours on September 21, 2023. Noise measurement results are shown in Table 3.13-3. Long-term noise measurements were taken at an unnamed dirt road (NM 2) south of the Manning Substation site and approximately 4,200 feet southwest of the nearest residence on Manning Avenue (R1) on September 21 and 22, 2023 (Figure 3.13-1). Noise measurement results are shown in Table 3.13-4. An American National Standards Institute (ANSI) S1.4 type 1 sound level meter (Casella CEL-633C) was used for the ambient noise level measurement surveys. The meter was calibrated before use with acoustical calibrators to ensure measurement accuracy. The measurement equipment meets all pertinent specifications of the ANSI. Noise measurement results show typical reference noise levels of the project vicinity, including noise from roadways and associated traffic. The results of the ambient noise measurement survey are summarized in Tables 3.13-3 and 3.13-4 and the summary of the noise measurements are shown in Table 3.13-5.

Table 3.13-3 Measured Hourly Noise Levels Near LSPGC 230 kV Transmission Line (NM 1)

Measurement Date	Measurement Time	Measured Noise Level (1-hour L_{eq} dBA)
September 21, 2023	1:00 p.m. – 2:00 p.m.	52
	10:40 p.m. – 11:40 p.m.	33

Notes: L_{eq} = average equivalent sound level; dBA = A-weighted sound level.

Source: Arcadis 2023.

Table 3.13-4 Measured Hourly Noise Levels near the Manning Substation Site (NM 2)

Measurement Date	Measurement Time	Measured Noise Level (1-hour L_{eq} dBA)
September 21, 2023	8:00 a.m. – 9:00 a.m.	44
	9:00 a.m. – 10:00 a.m.	39
	10:00 a.m. – 11:00 a.m.	37
	11:00 a.m. – 12:00 p.m.	42
	12:00 p.m. – 1:00 p.m.	45
	1:00 p.m. – 2:00 p.m.	32
	2:00 p.m. – 3:00 p.m.	41
	3:00 p.m. – 4:00 p.m.	41
	4:00 p.m. – 5:00 p.m.	44
	5:00 p.m. – 6:00 p.m.	44
	6:00 p.m. – 7:00 p.m.	44
	7:00 p.m. – 8:00 p.m.	41
	8:00 p.m. – 9:00 p.m.	40
	9:00 p.m. – 10:00 p.m.	36
	10:00 p.m. – 11:00 p.m.	36
	11:00 p.m. – 12:00 a.m.	38
September 22, 2023	12:00 a.m. – 1:00 a.m.	36
	1:00 a.m. – 2:00 a.m.	38
	2:00 a.m. – 3:00 a.m.	36
	3:00 a.m. – 4:00 a.m.	35
	5:00 a.m. – 6:00 a.m.	39
	6:00 a.m. – 7:00 a.m.	45
	7:00 a.m. – 8:00 a.m.	49

Notes: L_{eq} = average equivalent sound level; dBA = A-weighted sound level.

Source: Arcadis 2023.

Table 3.13-5 Summary of Measured Daytime and Nighttime Noise Levels

Noise Measurement Location	Measured Ambient L_{eq} (day), dBA	Measured Ambient L_{eq} (night), dBA	Calculated Ambient (L_{dn} , dBA)
NM 1	52	33	50
NM 2	43	39	46

Notes: $L_{eq(day)}$ = average equivalent sound level during daytime (7:00 a.m. to 10:00 p.m.); $L_{eq(night)}$ = average equivalent sound level during nighttime (10:00 p.m. to 7:00 a.m.); L_{dn} = A-weighted equivalent sound level for a 24-hour period with a 10-dB adjustment to sound levels occurring during nighttime hours (10:00 p.m. to 7:00 a.m.); dBA = A-weighted sound level.

Source: Arcadis 2023.

Existing Vibration Conditions

There are no existing vibration sources or activities (i.e., mine blasting, pile driving, etc.) near the project alignment. Rubber-tired vehicles such as those on nearby public roads and highways do not generate significant groundborne vibration (FTA 2018).

3.13.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to the evaluation of noise associated with the project.

STATE

No state plans, policies, regulations, or laws are applicable to the evaluation of noise associated with the project.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Although the County regulations are not applicable as the County of Fresno does not have jurisdiction over the project, the CPUC has elected to use the noise standards established in the Fresno County noise ordinance as the impact significance threshold for this proposed project.

Fresno County General Plan

The Health and Safety Element of the Fresno County General Plan sets forth goals, policies, and implementation programs to minimize exposure to excessive noise sources that may cause undue stress or annoyance. The following noise policies from the General Plan are relevant to the project:

- ▶ **Policy HS-H.1: Minimize Noise Impacts.** The County shall require that all proposed development incorporate design elements necessary to minimize adverse noise impacts on surrounding land uses.
- ▶ **Policy HS-H.5: Noise Mitigation Measures.** 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-H.6: Construction-related Noise.** The County shall regulate construction-related noise to reduce impacts on adjacent uses in accordance with the County's Noise Control Ordinance.
- ▶ **Policy HS-H.10: Construction Vibration Control Measures.** The following measures to minimize exposure to construction vibration shall be included as standard conditions of approval for projects involving construction vibration within 50 feet of historic buildings or nearby sensitive receivers shall:
 - a. Avoid the use of vibratory rollers within 50 feet of historic buildings or residential buildings with plastered walls that are susceptible to damage from vibration and;
 - b. Schedule construction activities with the highest potential to produce vibration to hours with the least potential to affect nearby institutional, educational, and office uses that are identified as sensitive to daytime vibration by the Federal Transit Administration in Noise and Vibration Impact Assessment (FTA 2018).

Fresno County Noise Ordinance

Chapter 8.40, "Noise Control," of the Fresno County Noise Ordinance provides performance standards and noise control guidelines for determining and mitigating non-transportation, or stationary, noise sources impacts on adjacent properties. The following sections of the Noise Ordinance are relevant to the project.

Section 8.40.040: Exterior Noise Standards

- A. It is unlawful for any person, including an owner, whether through the owner or the owner's agent, lessee, sublessor, sublessee or occupant, at any location within the unincorporated area of the county, to create any noise, or to allow the creation of any noise, on property owned, leased, occupied or otherwise controlled by such person which causes the exterior noise level when measured at any affected single- or multiple-family residence, school, hospital, church or public library situation in either the incorporated or unincorporated area to exceed the noise level standards as set forth in the following table [shown as Table 3.13-6]:

Table 3.13-6 Exterior Noise Standards

Cumulative Number of Minutes in Any One-Hour Time Period	Noise Level Standard (dBA) Daytime (7:00 a.m. to 10:00 p.m.)	Noise Level Standard (dBA) Nighttime (10:00 p.m. to 7:00 a.m.)
30	50	45
15	55	50
5	60	55
1	65	60
0	70	65

Source: Fresno County Ordinance Code.

- B. 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.
- C. Each of the noise level standards specified above shall be reduced by five dB(A) for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.
- D. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards.

Section 8.40.050: Interior Noise Standards

- A. It is unlawful for any person, at any location within the unincorporated areas of the county to operate or cause to be operated within a dwelling unit, any source of sound or to allow the creation of any noise which causes the noise level when measured inside a receiving dwelling unit situated in either the incorporated or unincorporated areas to exceed the noise level standards as set forth in the following table [shown as Table 3.13-7]:

Table 3.13-7 Interior Noise Standards

Cumulative Number of Minutes in Any 1-Hour Time Period	Noise Level Standard (dBA) Daytime (7:00 a.m. to 10:00 p.m.)	Noise Level Standard (dBA) Nighttime (10:00 p.m. to 7:00 a.m.)
5	45	35
1	50	40
0	55	45

Source: Fresno County Ordinance Code.

- B. 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.
- C. Each of the noise level standards specified above shall be reduced by five dB(A) for simple tone noises, noises consisting primarily of speech or music, or for recurring impulse noises.
- D. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards.

Section 8.40.060: Noise Source Exemptions

The following activities shall be exempted from the provisions of this chapter:

- A. Activities conducted in public parks, public playgrounds, and public or private school grounds, including but not limited to school athletic and school entertainment events;
- B. Any mechanical device, apparatus or equipment used, related to or connected with emergency activities or emergency work;
- C. Noise sources associated with construction, provided such activities do not take place before six a.m. or after nine p.m. on any day except Saturday or Sunday, or before seven a.m. or after five p.m. on Saturday or Sunday;
- D. Noise sources associated with the maintenance of residential property provided such activities take place between the hours of six a.m. and nine p.m. on any day except Saturday or Sunday, or between the hours of seven a.m. and nine p.m. on Saturday or Sunday;
- E. Noise sources associated with agricultural activities on agricultural property;
- F. Noise sources associated with a lawful commercial or industrial activity caused by mechanical devices or equipment, including air conditioning or refrigeration systems, installed prior to the effective date of this chapter; that this exemption shall expire on July 1, 1980;
- G. Noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities;
- H. Noise sources associate with the drilling or redrilling of petroleum, gas, injection or water wells;
- I. Noise sources associated with the collection of waste or garbage from property devoted to commercial or industrial uses;
- J. Any activity to the extent regulation thereof has been preempted by state or federal law.

Section 8.40.090: Electrical Substations

Notwithstanding the provisions of Section 8.40.040, noise sources associated with the operation of electrical substations shall not exceed fifty dBA when measured as provided in Section 8.40.030 of the Noise Ordinance.

3.13.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed applicant-proposed measures (APM) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CM) that would apply to the PG&E components of the project. There are no LSPGC APMs that address noise and vibration. The project includes the following PG&E CM related to noise.

PG&E CMs

CM NOI-1: Employ Noise-Reducing Construction Practices during Temporary Construction Activities. PG&E will employ standard noise-reducing construction practices such as the following:

- ▶ Ensure that all equipment is equipped with mufflers that meet or exceed factory new-equipment standards.
- ▶ Locate stationary equipment as far as practical from noise-sensitive receptors.
- ▶ Limit unnecessary engine idling.
- ▶ Limit all construction activity near sensitive receptors to daytime hours unless required for safety or to comply with line clearance requirements. Minimize noise-related disruption by notifying residents. Should nighttime Proposed Project construction be necessary because of planned clearance restrictions, affected residents will be notified at least 7 days in advance by mail, personal visit, or door hanger, and informed of the expected work schedule.

3.13.4 Discussion

- 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, or a substantial temporary or permanent increase in noise levels above existing ambient levels that could result in an adverse effect on humans?

LSPGC Project Components

Construction and Decommissioning

Daytime Construction

Construction and decommissioning are temporary noise-generating activities and noise from these activities ceases once the construction and decommissioning period is complete. Construction and decommissioning noise levels vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the noise source and receiver. This analysis assumes that decommissioning noise would be similar to construction noise because similar equipment would be used.

As mentioned in Section 3.13.2, "Regulatory Setting," in Fresno County, construction noise is exempt from local land use and zoning regulations as long as construction activities only occur between 6:00 a.m. and 9:00 p.m. on Monday through Friday and 7:00 a.m. to 5:00 p.m. on Saturday and Sunday (Fresno County Code of Ordinances Section 8.40.060, Noise Source Exemptions). As analyzed below under "Nighttime Construction," occasionally, work may occur after 9:00 p.m. for activities such as concrete pouring, delivery of large transformers, and stringing conductor over I-5 if required by Caltrans encroachment permit conditions.

LSPGC daytime construction activities would occur at the substation site and along the LSPGC 230 kV transmission line. These construction activities would include general construction with off-highway trucks and street sweepers, equipment mobilization, clearing of the access roads, structure assembly, structure installation, restoration, site preparation, grading and paving, foundation excavation and installation, landscaping, and construction of the Manning Substation. The nearest sensitive receptors to the LSPGC project components are R1, approximately 3,400 feet northeast of the substation site, and R2, approximately 190 feet north of the LSPGC 230 kV transmission line. As shown in Table 3.13-8, the loudest construction activities at the nearest sensitive receptors to the substation site and LSPGC 230 kV transmission line would be installation of structure foundations and grade construction.

Although noise would be as loud as 78 dBA L_{eq} from construction of the LSPGC 230 kV transmission line and 51 dBA L_{eq} from construction of the Manning Substation at the nearest sensitive receptors, pursuant to Fresno County Code Section 8.40.060(C), daytime construction noise is exempt from the County Noise Ordinance. Accordingly, to evaluate how the magnitude of the increase in ambient noise effects the significance of the noise impact, this MND evaluates noise impacts by comparing maximum anticipated noise levels to absolute noise limits and evaluating the temporary increase in noise levels above existing conditions.

In the absence of County-adopted daytime construction-related numerical noise limits, the FTA noise criteria are considered. The FTA has established construction noise criteria, including both magnitude and duration. The FTA's peak noise criterion is 90 dBA L_{eq} for residential receivers for daytime construction. Based on the modeling conducted, as shown in Table 3.13-8, project construction would not exceed this level at any sensitive receptor.

Based on available data of existing noise conditions the daytime hourly noise level near the proposed LSPGC 230 kV transmission line is 52 dBA L_{eq} , and the daytime hourly noise level near the substation site is 43 dBA L_{eq} (Table 3.13-5, NM 1 and NM 2). Noise levels from daytime construction are predicted to intermittently reach as high as 78 dBA L_{eq} at the receptor nearest to the 230 kV transmission line (R2) and as high as 52 dBA L_{eq} at the receptor nearest to the substation site (R1). In accordance with the FTA guidance, areas exposed to lower levels of ambient noise are less prone to adverse effects from increases in project noise, whereas areas exposed to higher ambient noise levels become increasingly adversely affected as noise levels increase (FTA 2018). Accordingly, a 10 dBA increase in noise

above ambient conditions is an appropriate consideration in determining significance for areas exposed to lower noise (i.e., below 65 dBA), such as R1 and R2. R1 near the substation site would not be exposed to noise levels 10 dBA above ambient conditions. However, R2 near the proposed LSPGC 230 kV transmission line would experience a noise level increase of more than 10 dBA, resulting in a perceived more than doubling of the existing noise level.

In addition to the perceived increase in noise, it is important to factor in the duration of noise exposure. Increasing exposure over time to excessive noise levels has the potential to result in increased human health impacts. Considering the linear nature of the project and numerous locations where construction would occur, R2 would be exposed to construction activities for a limited and short-term duration. The entire 11.5-mile LSPGC 230 kV transmission line would take 17 months to construct. R2 is near four proposed structure installation locations and one stringing site, thus would only be exposed to construction noise for a few weeks of the 17 month period. Regarding duration of noise exposure, other local jurisdictions (e.g., City of San Jose) have identified 12 months as the duration of noise that could result in human health effects. In consideration of the short-term duration of project construction near R2 (i.e., less than 12 months), while recognizing that construction would result in an increase in noise levels, the perceived increase in noise would be temporary and occur during the less sensitive times of the day (i.e., hours when people are awake). Therefore, the temporary increase in noise during daytime construction would not result in adverse health effects to nearby receptors.

Table 3.13-8 LSPGC Construction Noise Levels by Phase

	Phase	Construction Equipment	Noise Level at 190 Feet (dBA L_{eq}) (nearest sensitive receptor, R2)
230 kV Transmission Line			
	Site Access and Preparation	bulldozer, grader, roller, loader, water truck, dump truck	73
	Installation of Structure Foundation	Bulldozer, loader, backhoe, forklift, crane, auger drill rig, long reach drill rig, compressor, pump, drum mixer, jackhammer, concrete mixer truck, dump truck, slurry truck, water truck	78
	Erection of Support Structure	Forklift, crane, compressor, flatbed truck, water truck	74
	Stringing of Conductors, Shield Wire, and Fiber Optic Ground Wire	Dozer, backhoe, compressor, line puller, flatbed truck, specialty truck, water truck	74
Manning Substation			Noise Level at 3,400 Feet (dBA L_{eq}) (nearest sensitive receptor, R1)
	Survey	Pickup truck	34
	Site Preparation/Road Work	Bulldozer, grader, water truck, dump truck, roller, concrete mixer, paver, loader, pickup truck	50
	Grade Construction	Excavator, water truck, forklift, pickup truck, tractor, loader, auger drill rig, dump truck, trencher	51
	Equipment Installation	Pickup truck, man lift, crane, forklift, welder	49
	Commissioning and Testing	Pickup truck, forklift, man lift	48

Notes: L_{eq} = average equivalent sound level; dBA = A-weighted decibel.

Source: Arcadis 2023.

Helicopter Noise

Construction of LSPGC project components would include the use of a single light-duty helicopter (Hughes 500, Bell 429, MD 600 N, or similar models). Helicopter activities may include transportation of construction workers, delivery of equipment and materials to temporary construction areas, hardware installation, and/or installation of overhead conductor/cable. Helicopter operations would be limited to daylight hours during daytime construction. Helicopters would typically be staged and refueled at local airports including the San Joaquin Airport and Firebaugh Airport. Temporary helicopter takeoff and landing areas would be located within or adjacent to pulling sites and staging area (Appendix A, Figures 1 and 16). Each landing zone would be approximately 200 feet by 200 feet.

Light-duty helicopters typically result in noise of 71 to 81 dBA at 250 feet from the helicopter (Jacobs 2023). Most helicopter noise (refueling, take off, and landing) is expected to occur at landing zones and would only operate near residences during daytime hours. The nearest sensitive receptor to the landing sites is over 2 miles away. Therefore, helicopter noise would not result in a substantial temporary increase in noise.

See the section below for a discussion of helicopter use at night.

Nighttime Construction

Construction activities may occur after 9:00 p.m. for construction of the Manning Substation and stringing the transmission line over I-5. As shown in Table 3.13-4, nighttime noise from construction of the Manning Substation would be as loud as 51 dBA L_{eq} at the nearest noise sensitive receptor. Pursuant to Section 8.40.040 of the County Noise Ordinance, exterior nighttime noise levels shall not exceed 45 dBA L_{eq} and interior noise level shall not exceed 35 dBA L_{eq} . Therefore, nighttime construction of the Manning Substation would exceed applicable noise standards.

The nearest noise sensitive receptor to the stringing over I-5 is R1 located approximately 6,000 feet northeast of the stringing location. Equipment used for the stringing over I-5 would include a light-duty helicopter (Hughes 500, Bell 429, MD 600 N, or similar models) to string the sock line. Light-duty helicopters typically result in noise of 71 to 81 dBA at 250 feet from the helicopter (Jacobs 2023). Assuming helicopter noise of 81 dBA at 250 feet construction noise would be approximately 46 dBA L_{eq} at R1. Standard building construction attenuates noise by 20 dBA (FTA 2018). Interior noise levels from nighttime construction would thus be approximately 26 dBA L_{eq} at R1. Therefore, nighttime construction from stringing over I-5 would not exceed the County's exterior or interior nighttime noise levels of 45 dBA L_{eq} and 35 dBA L_{eq} , respectively.

Operation

Long term operational noise from the LSPGC project components would include corona noise from the proposed LSPGC 230 kV transmission line, operation of the Manning Substation, and transmission line maintenance activities such as washing the insulators, outage repairs, line repair, replacement, and reconductoring. Corona and electric field gradients cause audible noise from transmission lines and structures. Corona noise from the proposed LSPGC 230 kV transmission line was modeled for the project (Arcadis 2023). The transmission line would generate noise levels during fair weather at the edges of the LSPGC right-of-way up to 11 dBA. In foul weather, such as rain, the audible noise from the LSPGC 230 kV transmission line would increase to approximately 36 dBA at the edges of the LSPGC right-of-way. Therefore, corona noise from the LSPGC 230 kV transmission line would not be audible at the nearest sensitive receptor (R2) approximately 190 feet north (Arcadis 2023). The LSPGC 230 kV transmission line would not generate noise exceeding the County of Fresno daytime or nighttime exterior noise standards of 50 dBA L_{eq} and 45 dBA L_{eq} , respectively.

Operational noise from the Manning Substation would include noise from autotransformers and their associated cooling fans; heating ventilation and air conditioning (HVAC) equipment on the two control houses; and outdoor HVAC systems for the gas-induced switchgear enclosures. Table 3.13-5 shows modeled noise levels from operation of the Manning Substation at the nearest sensitive receptor (R1) approximately 3,400 feet northeast of the substation site. As shown in Table 3.13-5, noise levels from operation of the Manning Substation would not exceed the County of Fresno daytime or nighttime exterior noise standards of 50 dBA L_{eq} and 45 dBA L_{eq} , respectively. Additionally, consistent with the requirements of Section 8.40.090 of the County Code, operation of the substation would not exceed 50 dBA L_{eq} at the nearest sensitive receptor.

Table 3.13-9 Manning Substation Operational Noise Modeling Results

Time of Day	Modeled Noise Level at Nearest Sensitive Receptor (dBA Leq)	Modeled Noise Level plus Existing Noise Level (dBA Leq)	Noise Increase Above Existing Noise Level (dBA)
Daytime (7:00 a.m. to 10:00 p.m.)	34	43	0.5
Nighttime (10:00 p.m. to 7:00 a.m.)	34	40	1
Day/Night (24-hour average)	40 ¹	47 ¹	1

¹ Noise level results are in L_{dn} (A-weighted equivalent sound level for a 24-hour period with a 10 dB adjustment to sound levels occurring during nighttime [10:00 p.m. to 7:00 a.m.]).

Notes: Leq = average equivalent sound level; dBA = A-weighted decibel.

Source: Arcadis 2023.

LSPGC project components would be operated and monitored remotely with quarterly inspections of the Manning Substation. A small, specialized team would perform more extensive maintenance activities. Routine maintenance of the LSPGC 230 kV transmission line would require only one trip per year by crews of one to four people. Therefore, maintenance and operational activities would result in a negligible number of vehicle trips on area roadways that would not result in an increase in traffic noise. Finally, noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities is considered exempt from the County noise ordinance pursuant to Section 8.40.060(G) of the County Code.

Therefore, operation of the LSPGC project components would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the Fresno County general plan or County Code (because it is exempt or is below non-exempt activity thresholds), or a substantial temporary or permanent increase in noise levels above existing ambient levels.

PG&E Project Components

Construction and Decommissioning

PG&E construction activities would include reconductoring, installing structures, and re-routing transmission lines. The PG&E 230 kV Reconductoring would involve replacing existing transmission structures and conductors; the PG&E 230 kV and 115 kV Structure Raises would involve installing structures along existing PG&E transmission lines; the PG&E Panoche Substation Interconnection Modifications would include installation of structures adjacent to the substation; and the PG&E 12 kV Distribution Line would include extension of the existing line. This analysis assumes that decommissioning noise would be similar to construction noise because similar equipment would be used.

As shown in Table 3.13-8, installation of structure foundations would be as loud as 78 dBA Leq at 190 feet, and erecting support structures and stringing cables would be as loud as 74 dBA Leq at 190 feet. The PG&E 230 kV Reconductoring would parallel the LSPGC 230 kV transmission line. Therefore, the nearest sensitive receptor to the PG&E 230 kV Reconductoring would be R3 located 90 feet north. The PG&E Panoche Substation Interconnection Modifications would be located 662 feet south of the existing single family residence (R4). There are no noise sensitive receptors within 0.25 mile (1,320 feet) of the proposed PG&E 500 kV Interconnections, PG&E 230 kV Interconnections, and PG&E 230 and 115 kV Structure Raises. Therefore, construction noise impacts would be less than described below for remaining PG&E project components. Assuming an attenuation rate of 6 dBA for doubling of distance, installation of structure foundations would be as loud as 86 dBA Leq at 90 feet, and erecting support structures and stringing cables would be as loud as 82 dBA Leq at 90 feet, as shown in Table 3.13-10. Nighttime construction may be conducted by PG&E and would include structure replacement along the 230 kV transmission line portion of the existing Panoche-Tranquillity 230kV lines. The foundations would be installed during the day, then the structures may be swapped out at night. Structure replacement during nighttime hours would be as loud as 82 dBA Leq at the nearest sensitive receptor at 90 feet, as shown in Table 3.13-10.

Noise sources associated with work performed by a private or public utility in the maintenance or modification of its facilities is considered exempt from the County noise ordinance pursuant to Section 8.40.060(G) of the County Code.

Construction (i.e., modification of existing facilities) of the PG&E components falls under this exemption. Additionally, pursuant to Section 8.40.060(C), daytime construction noise is exempt from the County Noise Ordinance, and construction of PG&E project components would occur during daytime hours, unless nighttime work would be required. Nighttime construction work of PG&E project components would be exempt from the County noise ordinance pursuant to Section 8.40.060(G) of the County Code and is not discussed further.

Although daytime construction of PG&E facilities would be exempt from the County noise ordinance Section 8.40.060(C) this analysis includes an evaluation in consideration of maximum anticipated noise levels in comparison to absolute noise limits and substantial temporary increase in noise levels above existing daytime conditions. The FTA has established construction noise criteria, including magnitude and duration. The peak noise criterion is 90 dBA L_{eq} for residential receivers for daytime construction. Based on the modeling conducted, as shown in Table 3.13-10, this noise level would not be exceeded at R3.

Based on available existing noise conditions the daytime hourly noise level near the proposed PG&E 230 kV Reconductoring is 52 dBA L_{eq} (Table 3.13-5, NM 1). Noise levels from construction are predicted to intermittently reach as high as 86 dBA L_{eq} at the receptor nearest to the PG&E 230 kV Reconductoring (R3). In accordance with the FTA guidance, areas exposed to lower levels of noise are less prone to adverse effects from increases in project noise, whereas areas exposed to higher noise levels become increasingly adversely affected as noise levels increase (FTA 2018). Accordingly, a 10 dBA increase in noise would be a reasonable threshold for areas exposed to lower noise (i.e., below 65 dBA), such as R3. R3 would experience a noise level increase during construction of more than 10 dBA, resulting in a perceived more than doubling of the existing noise level. Nonetheless, in addition to the perceived increase in noise, it is important to factor in the duration of noise exposure. Increasing exposure over time to excessive noise levels has the potential to result in increased human health impacts. Considering the linear nature of the project and numerous locations where construction would occur R3 would be exposed to construction activities for a limited and short-term duration. R3 is near four proposed PG&E structures to be replaced along the entire 7-mile PG&E 230 kV Reconductoring, which would take 12 months to construct. Therefore, construction near R3 would last only a few weeks. Regarding duration of noise exposure, other local jurisdictions (e.g., City of San Jose) have identified extended periods of construction as a 12-month period. In consideration of the short-term duration of project construction near R3 (i.e., less than 12 months at R3), while recognizing that construction would result in an increase in noise levels, the perceived increase in noise would be temporary and the loudest construction noise (installation of structure foundations) would occur during the less sensitive times of the day (i.e., hours when people are awake). Therefore, a temporary increase in daytime construction noise would not result in adverse health effects to nearby receptors.

Table 3.13-10 LSPGC Construction Noise Levels by Phase

	Phase	Construction Equipment	Noise Level at 90 Feet (dBA L_{eq}) (nearest sensitive receptor, R3)
230 kV Transmission Line			
	Installation of Structure Foundation	Bulldozer, loader, backhoe, forklift, crane, auger drill rig, long reach drill rig, compressor, pump, drum mixer, jackhammer, concrete mixer truck, dump truck, slurry truck, water truck	86
	Erection of Support Structure	Forklift, crane, compressor, flatbed truck, water truck	82

Notes: L_{eq} = average equivalent sound level; dBA = A-weighted decibel.

Source: Arcadis 2023.

Helicopter Noise

Construction of PG&E project components would include the use of light-duty helicopters (Hughes 500, Bell 429, MD 600 N, or similar models). PG&E's transmission line work would utilize one helicopter for the PG&E 500 kV Interconnections, two helicopters for the PG&E 230 kV Interconnections, two helicopters for the PG&E 230 kV Reconductoring, and one helicopter for the PG&E 230 kV and 115 kV structure raises. Helicopter activities may include

transportation of construction workers, delivery of equipment and materials to temporary construction areas, hardware installation, and/or installation of overhead conductor/cable. Helicopter operations would be limited to daylight hours during daytime construction. Helicopters would typically be staged and refueled at local airports including the San Joaquin Airport and Firebaugh Airport. Proposed temporary helicopter takeoff and landing areas would be located within or adjacent to pulling sites and staging area (Appendix A, Figures 1 and 16). Each landing zone would be approximately 200 feet by 200 feet.

Light-duty helicopters typically result in noise of 71 to 81 dBA at 250 feet from the helicopter (Jacobs 2023). Most helicopter noise (refueling, take off, and landing) is expected to occur at landing zones and would operate near residences during daytime hours only. The nearest sensitive receptor to the landing sites is over 2 miles. Therefore, helicopter noise would not result in a substantial temporary increase in noise.

Implementation of CMs

CM NOI-1 would ensure that muffler equipment is in good condition and not creating unnecessarily loud noise; turning off construction equipment when not in use; locating stationary equipment and construction materials as far away from sensitive receptors as possible; and limiting construction near sensitive receptors to daytime hours and notifying residents of when construction activities would occur near them. If nighttime construction were to occur as part of CM NOI-1, PG&E would notify residents at least 7 days in advance of the expected nighttime work.

Operation

New long term operational noise from the PG&E project components would include corona noise from the proposed PG&E 230 kV and 500 kV Interconnections and transmission line maintenance activities such as washing the insulators, outage repairs, line repair, replacement, and reconductoring. Corona noise from the proposed PG&E project components was modeled for the project (Arcadis 2023). The PG&E 230 kV Interconnections would generate noise levels during fair weather at the edges of the PG&E right-of-way up to 11 dBA and 36 dBA in foul weather. Therefore, corona noise from the PG&E 230 kV Interconnection would not be audible at the nearest sensitive receptor over 0.25 mile away (Arcadis 2023). The PG&E 500 kV Interconnections would generate noise levels during fair weather at the edges of the PG&E right-of-way up to 41 dBA and 66 dBA in foul weather. Noise at the nearest sensitive receptor over 0.25 mile (1,320 feet) from the PG&E 500 kV Interconnections would range from 31 to 56 dBA L_{eq} . However, in foul weather the audible noise levels from the PG&E 500 kV Interconnections would be masked by weather conditions (i.e., rain and wind) and not be audible at the nearest receptor. The proposed PG&E 12 kV Distribution Line would be located over 3,400 feet from the nearest sensitive receptor and any noise from the distribution line would not be audible.

Operation and maintenance for the PG&E project components would be similar to existing operation and maintenance activities PG&E currently performs in the project vicinity on the exiting Panoche-Tranquillity Switching Station #1 and #2 230 kV transmission line. The addition of the PG&E 230 kV and 500 kV Interconnections would result in a negligible number of new trips on area roadways and minimal traffic noise. The PG&E 230 kV and 115 kV Structure Raises would occur along PG&E's existing transmission lines and the PG&E Panoche Substation Interconnection Modifications would install structures to re-route existing transmission lines. Therefore, existing operation and maintenance for these PG&E project components would not change as part of the project. The PG&E 12 kV Distribution Line would require minimal maintenance and would be incorporated into PG&E's existing maintenance routine. Minimal traffic noise would result.

Noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities is considered exempt from the County noise ordinance pursuant to Section 8.40.060(G) of the County Code. Construction (i.e., modification of existing facilities), operation, and maintenance of the PG&E components falls under this exemption.

Significance before Mitigation

PG&E's construction activities are considered exempt from the County noise ordinance pursuant to Section 8.40.060(G) of the County Code, which exempts work performed by private or public utilities in the maintenance or

modification of their facilities. Implementation of PG&E CM NOI-1 would further reduce construction noise resulting from PG&E project components.

Regarding LSPGC's project components, daytime construction is exempt from county noise thresholds. Nonetheless, the magnitude of increase (i.e., greater than 90 dBA per FTA) and duration of noise (i.e., longer than 12 months) near sensitive receptors was considered when determining the significance of noise impacts during daytime construction.

Construction of LSPGC project facilities would be as loud as 86 dBA L_{eq} at the nearest noise sensitive receptor. The nearest sensitive receptors to daytime helicopter use would be over 2 miles away and helicopter noise would not be perceptible. Therefore, daytime helicopter use, in combination with the proposed construction phases, would not result in an increase in construction noise above what is shown in Table 3.13-8. Pursuant to Section 8.40.060(C) of the County Code, daytime construction noise is exempt from the County Noise Ordinance. Additionally, due to the short-term nature of the construction activities near R1, R2, and R3, and considering that construction would occur during less sensitive times of the day, the daytime temporary increase in noise would not result in adverse health effects to nearby receptors.

As shown in Table 3.13-5, noise levels from operation of the Manning Substation would not exceed the County of Fresno daytime or nighttime exterior noise standards of 50 dBA L_{eq} and 45 dBA L_{eq} , respectively. Additionally, consistent with the requirements of Section 8.40.090 of the County Code, operation of the substation would not exceed 50 dBA L_{eq} at the nearest sensitive receptor. Operation and maintenance for the PG&E project components would be similar to existing operation and maintenance activities PG&E currently performs in the project vicinity. Additionally, corona noise from both LSPGC and PG&E project components would not be audible at the nearest sensitive receptors. Therefore, operational noise of PG&E project components would result in a negligible increase in noise, and combined with operation of nearby LSPGC project components would not result in a perceptible increase in noise.

Nighttime construction may be conducted by LSPGC at the Manning Substation site and over I-5, and by PG&E for structure replacement along the 230 kV transmission line. Nighttime construction noise resulting from PG&E project components is considered exempt from the County noise ordinance pursuant to Section 8.40.060(G) of the County Code. LSPGC nighttime construction noise at the substation site would be as loud as 51 dBA L_{eq} at R1 (see Figure 3.13-1) and nighttime helicopter noise would be as loud at 46 dBA L_{eq} at R1. Therefore, the combined nighttime construction noise at R1 would be approximately 52 dBA L_{eq} , which would exceed County exterior and interior noise standards. LSPGC construction noise from stringing over I-5 would not exceed County noise standards. However, because LSPGC's nighttime construction of the Manning Substation would exceed County noise standards, construction noise impacts would be significant without mitigation.

Mitigation Measures

Mitigation Measure N-1: Implement Measures to Reduce Exposure of Noise-Sensitive Receptors to Construction-Generated Nighttime Noise [LSPGC]

Construction noise at Sensitive Receptor 1 (R1) (3,400 feet from the substation site) shall not exceed the County's nighttime noise threshold of 45 dBA between the hours of 9:00 p.m. and 7:00 a.m. To minimize noise levels during nighttime construction activities and maintain nighttime noise below the abovementioned County threshold, LSPGC could implement the following measures during nighttime construction work at the Manning Substation site:

- ▶ Maintain construction equipment and equip with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.
- ▶ Shut down motorized construction equipment when not in use to prevent idling.
- ▶ Locate construction equipment and staging areas as far as possible from nearby noise-sensitive land uses.
- ▶ Equip construction equipment with back-up alarms with either audible self-adjusting backup alarms or alarms that sound only when an object is detected.

- ▶ Install noise control devices on construction equipment, which may include but are not limited to: high-efficiency mufflers; acoustic dampening; protected internal noise absorption layers; enclosures; alternatively powered equipment; and electric motors.
- ▶ LSPGC shall notify R1, the single-family residence on Manning Avenue near the proposed Manning Substation, of the expected nighttime work schedule at least 7 days in advance by mail, email, phone call, personal visit, or door hanger. The notice shall contain a contact and telephone number for receipt of any public complaints and questions. The contact shall be responsible for determining the cause of the complaint and implementing any possible measures to alleviate the problem. If unanticipated work, including in emergency situations, extends to the hours of 9:00 p.m. to 7:00 a.m., LSPGC will immediately notify the CPUC and notify R1 via mail, email, phone call or personal visit.

Significance after Mitigation

Implementation of Mitigation Measure N-1 would require reductions in levels of nighttime construction noise exposure from the substation site to 45 dBA L_{eq} or lower at noise-sensitive receptors by ensuring proper equipment maintenance and use; locating noise-generating equipment away from off-site sensitive land uses (R1); requiring the proper use of available noise-reduction equipment, including alternatively powered equipment, exhaust mufflers, engine shrouds, and equipment enclosures; and requiring a notice and contact information for any nighttime construction noise complaints. Implementation of these noise-reduction features can reduce construction noise levels by approximately 10 dBA, or more (NCHRP 1999; EPA 1971). With mitigation, construction-generated noise levels would be substantially reduced from 52 dBA L_{eq} to 45 dBA L_{eq} or lower consistent with the County's nighttime noise standards. Standard building construction attenuates noise by 20 dBA (FTA 2018). Therefore, interior noise standards would be reduced to approximately 25 dBA L_{eq} consistent with the City's nighttime interior noise standards. Project construction would not exceed County noise standards. Therefore, LSPGC nighttime construction noise would be **less than significant**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

LSPGC and PG&E Project Components

Project construction and decommissioning would not involve the use of ground vibration-intensive activities, such as pile driving or blasting. Pieces of equipment that generate lower levels of ground vibration, such as rollers and pavers, would be used during construction. These types of common construction and decommissioning equipment do not generate substantial levels of ground vibration that could result in structural damage, except at extremely close distances. The most ground vibration-intensive activity that could be performed during project construction would be the use of a large bulldozer during grading and site preparation activities and a drill rig for installation of TSPs and LSTs.

Large bulldozers and drill rigs generate ground vibration levels of 0.089 in/sec PPV and 87 VdB at 25 feet (FTA 2018:184). If vibration from construction activities were within 12 feet of sensitive receptors, construction activities would exceed the FTA's threshold of significance of 0.2 in/sec PPV for building structural damage and would exceed the threshold of significance for human annoyance of 80 VdB if activities occurred within 50 feet of sensitive receptors (Arcadis 2023).

The nearest sensitive receptors to the project alignment are R1 approximately 3,400 feet northeast of the substation site; R2 approximately 1,090 feet south of the LSPGC 230 kV transmission line and PG&E 230 kV Reconductoring; and R3 approximately 190 feet north of the LSPGC 230 kV transmission line and approximately 90 feet north PG&E 230 kV Reconductoring. PG&E Panoche Substation Interconnection Modifications would be located 662 feet south of an existing single family residence. There are no noise sensitive receptors within 0.25 mile (1,320 feet) of the proposed PG&E 500 kV Interconnections, PG&E 230 kV Interconnections, and PG&E 230 and 115 kV Structure Raises. Because the thresholds of significance for building structural damage or human annoyance would not be exceeded at any sensitive receptor, construction activities would not have the potential to result in substantial vibration exposure (annoyance and structural damage) at nearby residential structures.

LSPGC operation and maintenance would consist of minimal vehicle trips to the substation site and along the 230 kV transmission line. PG&E operation and maintenance activities would be similar to what is currently performed on the existing transmission lines. These activities would not use equipment associated with vibratory effects and would not generate substantial vibration. Therefore, the project would not result in the potential to expose nearby receptors to substantial vibration levels during construction, decommissioning, or operation. Impacts would be **less than significant**.

- 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?

LSPGC and PG&E Project Components

The project site is not located within an airport land use plan or within 2 miles of any public or private airport. Therefore, the project would not expose people residing or working in the project area to excessive noise levels in proximity to an airport. There would be **no impact**.

3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>

3.14.1 Environmental Setting

POPULATION

As part of its regional planning functions, the Fresno Council of Governments (FCOG) develops regional population, employment, and housing forecasts for Fresno County and the cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma. The Housing Elements of the County’s and cities’ general plans incorporate population, employment, and housing estimates from FCOG into their overall planning efforts. A discussion of population, employment, and housing trends in Fresno County is provided below.

Population Trends

According to the California Department of Finance (DOF), population in the county increased from 968,417 residents in 2015 to 1,008,654 residents in 2020 (Table 3.14-1) (DOF 2024a). Between 2020 and 2024, moreover, the population increased to 1,017,431 residents (DOF 2024b). Overall, the population in the county has increased 5.06 percent since 2015. Table 3.14-1 shows the population of the county in 2015, 2020, and 2024.

Table 3.14-1 Total Population in Fresno County

Jurisdiction	2015	2020	2024	Percent Growth (2015-2024)
Fresno County	968,417	1,008,654	1,017,431	5.06

Sources: DOF 2024a; DOF 2024b.

Looking ahead, FCOG projects that the population of the county will be approximately 1,112,010 residents by 2030 and 1,240,090 residents by 2050 (FCOG 2020). Respectively, these projections each represent a 14.83 percent increase by 2030 and a 28.05 percent increase by 2050 from the county’s 2015 population.

HOUSING

As shown in Table 3.14-2, Fresno County experienced a housing growth rate of 7.4 percent between 2015 and 2024 (DOF 2024a, 2024b). In total, 23,916 housing units have been constructed in Fresno County since 2015 (DOF 2024b).

Table 3.14-2 Housing Units in Fresno County

Jurisdiction	Total Housing Units 2015	Total Housing Units 2020	Total Housing Units 2024	Percent Increase from 2015 to 2024
Fresno County	325,301	337,848	349,217	7.4

Sources: DOF 2024a; DOF 2024b.

EMPLOYMENT

The State of California Employment Development Department (EDD) compiles current and historical employment data for California counties and metropolitan areas. According to EDD, employment in Fresno County increased approximately 16.7 percent (60,200 jobs) between 2010 and 2020. As of 2024, the top four industries in terms of share of total employment are private education and health services (20.0 percent); trade, transportation, and utilities (18.0 percent); government (18.4 percent); and goods-producing services (11.5 percent). From 2010 to 2020, the private education and health services industry gained 22,700 new employees, resulting in the highest share of new employment for the region (EDD 2024).

EDD data show the unemployment rate in the county has generally been 1 to 3 percentage points above the state unemployment rate. In January of 2024, the statewide unemployment rate was 5.2 percent, and the countywide unemployment rate was 8.8 percent. The countywide unemployment rate has sharply decreased since the 2020 COVID-19 recession, when it peaked at 17.4 percent, and was at 7.6 percent as of April 2024 (EDD 2024).

3.14.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to population, employment, or housing for the project.

STATE

California Housing Element Law

California’s Housing Element Law (California Government Code Sections 65580–65589.8) recognized that early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, was a “priority of the highest order.” The law was enacted to ensure that counties and cities recognize their proportionate responsibilities in contributing to the attainment of state housing goals, to establish the requirement that all counties and cities adopt housing elements to help meet state goals, to recognize that each locality is best capable of determining what efforts it is required to take to contribute to attainment of state housing needs, and to encourage and facilitate cooperation between local governments to address regional housing needs. Section 65583 states, “the housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing,” and “the housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community.”

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable because Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County Housing Element (Fresno County 2024) includes goals and policies that aim to ensure the sufficient availability of and access to a wide variety of housing units in the county. No policies from the General Plan Housing Element are relevant to the proposed project.

Fresno Council of Governments

FCOG is an association of local governments from cities in Fresno County. The member agencies include the cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma as well as unincorporated Fresno County. FCOG is mainly responsible for transportation planning and programming for the region. Furthermore, FCOG is responsible for and oversees the Regional Housing Needs Allocation (RHNA), a process mandated by California state law that requires each city and county to have land zoned to accommodate a fair share of the regional housing need.

Adopted on November 17, 2022, the Fresno County RHNA Plan covers the 8-year planning period between 2023 and December 31, 2031 (Fresno County 2024). The plan includes housing at four different income levels, including very low, low, moderate, and above-moderate.

Fresno County is required to make development occur; however, the County must facilitate housing production by ensuring that land is available and that unnecessary development constraints have been removed. The 2023-2031 Housing Element Update shows how the County will accommodate the RHNA (Fresno County 2024).

3.14.3 Applicant-Proposed Measures and PG&E Construction Measures

There are no applicable applicant-proposed measures (APMs) or PG&E construction measures (CMs) relevant to population, employment, or housing.

3.14.4 Discussion

- 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)?

LSPGC and PG&E Project Components

The project would involve the construction, operation, and maintenance of the new Manning Substation, overhead transmission lines, and associated infrastructure to address reliability and capacity issues on the existing LSPGC and PG&E electrical systems in Fresno County. As discussed in Section 2.4.1, the existing electrical system in the vicinity of the project alignment is experiencing voltage issues and thermal overloads. The area to be served by the project is growing in population and forecasted to continue to grow its power load requirements, which would worsen these voltage and thermal overload issues over time and could consequently result in systemwide outages. Hence, the

project would install power infrastructure in Fresno County to serve existing and planned future customers and prevent service interruptions.

Although the population in Fresno County is growing, current and projected growth has been anticipated in the FCOG and Fresno County growth projections. The project does not propose any new housing, businesses, or other land use changes that would induce substantial unplanned population growth or housing demand in or near the project alignment area. Construction of the LSPGC and PG&E project components would be performed by approximately 66 total construction workers per day during the peak months of construction. Construction of LSPGC and PG&E project components would be completed by employees who are local to the area within and near the project vicinity. If the need arises to bring in workers from outside the project vicinity to assist with project construction, these workers would either commute to the project alignment area from their current locations or relocate to the area temporarily. Neither LSPGC nor PG&E would hire new construction workers that would require permanent relocation to the project vicinity because of the project. In addition, operation and maintenance of the project would be performed remotely or by current LSPGC and PG&E employees. The project would not result in people permanently moving to Fresno County. As a result, the project would not directly or indirectly induce substantial unplanned population growth or housing demand beyond what is forecasted in the FCOG or Fresno County projections for the county. The impact would be **less than significant**.

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

LSPGC and PG&E Project Components

There is no housing where the LSPGC and PG&E project components would be located, and there are no approved or pending housing developments within 1 mile of the project alignment area. Therefore, the construction, operation, and maintenance of both the LSPGC and PG&E project components would not demolish or displace any existing housing or residential structures. Members of the community residing in or near the project vicinity would not be displaced by project activities, and no replacement housing would need to be constructed. Therefore, there would be **no impact**.

3.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services.				
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

FIRE PROTECTION

Fresno County Fire Protection District

The Fresno County Fire Protection District (FCFPD) provides protection and emergency services in the unincorporated areas of Fresno County, including the project alignment area. The FCFPD is a full-service fire protection district providing emergency response, fire prevention, protection planning, and risk reduction educational services to more than 220,000 residents within an approximately 2,600-square-mile response area (FCFPD 2024). In cooperation with the California Department of Forestry and Fire Protection (CAL FIRE), FCFPD provides emergency fire protection services with 15 stations in both incorporated and unincorporated areas of the county (FCFPD 2024).

The fire stations closest to the project alignment area are:

- ▶ Fresno County Fire Station 95 at 25101 West Morton Avenue in the community of Tranquillity, which is located approximately 10 miles northeast of PG&E's existing Tranquillity Switching Station, and
- ▶ Fresno County Fire Station 96 at 101 McCabe Avenue in the City of Mendota, which is located approximately 13 miles northeast of the proposed PG&E Panoche Interconnection Substation Modifications.

Central California Emergency Medical Services (CCEMS) is responsible for medical emergencies and responses for Fresno, Madera, King, and Tulare counties. CCEMS provides policies, protocols, and operation support for medical incidents in the counties. An ambulance must be responding within 2 minutes of being alerted to a call that requires immediate dispatch. If the ambulance unit does not notify that it is en route or respond within 2 minutes, the ambulance dispatch center will send a second alert page to the ambulance and consider the dispatch of the next closest appropriate ambulance (CCEMS 2018).

An important requirement for fire suppression is adequate fire flow, which is the amount of water, expressed in gallons per minute, available to control a given fire and the length of time this flow is available. The total fire flow needed to extinguish a structural fire is based on a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building depend on standards set in the California Fire Code. Currently, adequate fire flow is provided in the project alignment area (FCFPD 2024).

LAW ENFORCEMENT

Fresno County Sheriff's Office

The Fresno County Sheriff's Office (FCSO) provides law enforcement services to approximately 6,000 square miles in the unincorporated areas of Fresno County, including the project alignment area. The FCSO provides patrol services for the county with four patrol areas that are each commanded by a lieutenant who supervises field services from a station located in each area. The project alignment area is located in Patrol Area 1, which covers approximately 2,400 square miles of western Fresno County and the cities of San Joaquin, Coalinga, Huron, Kerman, Mendota, and Firebaugh. The eastern end of the project alignment area is located approximately 12 miles west of the Fresno County Sheriff Area 1 Substation.

California Highway Patrol

The California Highway Patrol (CHP) is responsible for traffic enforcement services on public streets and highways within Fresno County. CHP traffic enforcement service for the project alignment area is provided from either of the CHP offices located in Fresno at 1380 East Fortune Avenue and 5179 North Gates Avenue. CHP also provides other special law enforcement services and mutual aid to the FCSO upon request.

SCHOOLS

The Mendota Unified School District serves the communities in the vicinity of the project alignment area. The Mendota Unified School District includes a total of 3,800 students enrolled in one preschool, three elementary schools, one junior high school, one high school, and one alternative education school. The closest public school to the proposed project alignment area is Cantua Elementary at 29288 West Clarkson Avenue in the community of Cantua Creek, which is located approximately 8 miles southeast of the project alignment area.

PARKS

The project is in an area composed of mostly privately owned agricultural lands. No public parks or other recreational areas are located within 0.5 miles of the project alignment area. The closest recreational area to the project alignment area is the BLM's Tumey Hills recreation area, which is located approximately 0.8 miles southwest of the project alignment area and approximately 1.5 miles from the proposed Manning Substation site. See Section 3.16, "Recreation," for additional information regarding parks.

LIBRARIES

Library services serving the area in the project vicinity are provided by the Tranquillity Branch Library, the San Joaquin Branch Library, and the Mendota Branch Library. The Tranquillity Branch Library is located at 25561 Williams Street in the community of Tranquillity, approximately 9 miles northeast of the project alignment. The San Joaquin Branch Library is located at 8781 Main Street in the City of San Joaquin, approximately 12 miles northeast of the existing Tranquillity Switching Station. Finally, the Mendota Branch Library is located at 1246 Belmont Avenue in the City of Mendota approximately 13 miles northeast of the existing Tranquillity Switching Station.

3.15.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to public services for the project.

STATE

California Fire Code

The 2019 California Fire Code, which incorporates by adoption the 2018 International Fire Code, contains regulations related to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code); fire protection and notification systems; fire protection devices, such as extinguishers and smoke alarms; high-rise building and childcare facility standards; and fire-suppression training.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Public Facilities and Services Element (Fresno County 2024) includes goals and policies that aim to maintain optimal levels of service and quality for fire and police protection, public education, and other public facilities in the county. The following policies from the General Plan are relevant to the project:

- ▶ **Policy PF-G.1: Effective Law Enforcement.** The County shall ensure the provision of effective law enforcement services to unincorporated areas in the county.
- ▶ **Policy PF-G.4: Law Enforcement Service Standards.** The County shall require development to pay its fair share of the costs for providing law enforcement facilities and equipment to maintain service standards.
- ▶ **Policy PF-G.5: Law Enforcement Service Standards.** The County shall provide law enforcement support to adequately maintain its service standards, within the County's budgetary constraints.
- ▶ **Policy PF-G.6: Safe Design Features.** The County shall promote the incorporation of safe design features (e.g., lighting, adequate view from streets into parks) into new development by providing the Sheriff Department the opportunity to review development proposals.

- ▶ **Policy PF-H.1: Provision of Fire/Emergency Medical Service.** 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: Adequate Fire Protection Facilities.** Prior to the approval of a development project, the County shall determine the need for fire protection services. New development in unincorporated areas of the county shall not be approved until such time that fire protection facilities and services acceptable to the Public Works and Planning Director in consultation with the appropriate fire district are provided.
- ▶ **Policy PF-H.5: Minimize Fire Hazard Risk.** The County shall require that new development be designed to maximize safety and minimize fire hazard risks to life and property.
- ▶ **Policy PF-H.10: California Fire Code.** The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the California Fire Code and other State and local ordinances.
- ▶ **Policy PF-I.9: Library Services.** The County shall promote provision of library services throughout the county and create new facilities as appropriate or expand existing facilities to meet additional demand from new growth. The need for library services should be addressed as part of the public services and facilities of the community plans when they are updated.

3.15.3 Applicant-Proposed Measures and PG&E Construction Measures

There are no applicable applicant-proposed measures (APMs) or PG&E construction measures (CMs) relevant to the provision of public services.

3.15.4 Discussion

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

LSPGC and PG&E Project Components

The proposed project would involve the construction, operation, and maintenance of the Manning Substation, overhead transmission lines, and associated infrastructure to address reliability and capacity issues on the existing electrical systems in Fresno County. As discussed in Section 3.14, "Population and Housing," current and projected growth has been anticipated in the FCOG and the County's growth projections. If the need arises to bring in workers for the project from outside the project vicinity to assist with project construction, these workers would either commute to the project alignment area from their current locations or relocate to the area temporarily. Therefore, any increase in population would be from new or existing LSPGC or PG&E workers temporarily relocating to the area. There would be no permanent increase in population as a result of the project, and the project would be within the scope of the FCOG growth projections for the county. Furthermore, the project does not propose new housing, businesses, or other land use changes that would induce unplanned population growth or increase housing demand in the project vicinity. As discussed in Section 3.20, "Wildfire," the project would not increase the risk of wildfire. Therefore, the project would not result in increased demand for fire protection, police protection, schools, parks, or other public facilities, such as libraries, in the project vicinity. The construction, operation, and maintenance of the proposed project would not result in the provision of new or physically altered fire and police protection facilities, schools, parks, or other public facilities in the project vicinity or the need for new or physically altered public facilities in the project vicinity. There would be **no impact**.

3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that 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 FACILITIES AND PARKS

The proposed project alignment is in an area composed of mostly privately owned agricultural lands. No public parks or other recreational areas are located within 0.5 miles of the project alignment area. The closest recreational area to the project is the Bureau of Land Management's (BLM's) Tumey Hills recreation area, which is located approximately 0.8 miles southwest of the project alignment and approximately 1.5 miles from the proposed Manning Substation site. The Tumey Hills recreation area offers ample opportunities for bicycling, camping, hiking, horseback riding, photography, and wildlife viewing. The access point to the Tumey Hills is approximately 2 miles northwest of the project alignment. The access point connects to Panoche Road, approximately 2 miles west of the Interstate 5 and Panoche Road interchange (BLM 2023).

3.16.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to recreation are applicable to the project.

STATE

No state plans, policies, regulations, or laws related to recreation are applicable to the project.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Open Space and Conservation Element (Fresno County 2024) includes goals and policies that aim to increase recreational opportunities for residents and visitors in the county. The following policies from the General Plan are relevant to the project:

- ▶ **Policy OS-H.2: Park Standards.** 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.3: Quimby Act.** The County may require the dedication of land and/or payment of fees where applicable, in accordance with local authority and State law (e.g., Quimby Act), to ensure funding for the acquisition and development of public recreation facilities. The fees are to be set and adjusted, as necessary, to provide for a level of funding that meets the actual cost to provide for all the public parkland and park development needs generated by new development
- ▶ **Policy OS-H.13. Western Recreational Facilities.** The County shall encourage the development of recreation facilities in western Fresno County.

3.16.3 Applicant-Proposed Measures and PG&E Construction Measures

There are no applicable applicant-proposed measures (APMs) or PG&E construction measures (CMs) relevant to recreation.

3.16.4 Discussion

- 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, or damage recreational trails or facilities?

LSPGC and PG&E Project Components

The project would involve the construction, operation, and maintenance of the Manning Substation, overhead transmission lines, and associated infrastructure to address reliability and capacity issues on the existing electrical systems in Fresno County. As discussed in Section 3.14, "Population and Housing," current and projected growth has been anticipated in the FCOG and the County's growth projections. Therefore, any increase in population from new or existing LSPGC or PG&E workers temporarily relocating to the area because of the project would be within the scope of the FCOG growth projections for the county. Further, the project does not propose new housing, businesses, or other land use changes that would induce unplanned population growth or increase housing demand in the project area. Therefore, the construction, operation, and maintenance of the project would not result in the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of such facilities would occur or be accelerated.

In addition, as explained above, there are no parks or recreational facilities within 0.5 miles of the project alignment, and the nearest recreational area to the project is the Tumey Hills recreation area that is located approximately 0.8 miles southwest of the project alignment. The project alignment area would not cross or overlap with any recreational areas, and as such would not damage any recreational trails or facilities. There would be **no impact**.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

LSPGC and PG&E Project Components

The project would involve the construction, operation, and maintenance of the Manning Substation, overhead transmission lines, and associated infrastructure to address reliability and capacity issues on the existing electrical systems in Fresno County. As discussed in Section 3.14, "Population and Housing," current and projected growth has been anticipated in the FCOG and the County's growth projections. Therefore, any increase in population from new or existing LSPGC or PG&E workers temporarily relocating to the area because of the project would be within the scope of the FCOG growth projections for the county. Furthermore, the project does not propose new housing, businesses, or other land use changes that would induce unplanned population growth or increase housing demand in the project area. Therefore, the project would not have any impact on the existing ratio of parkland to residents in the county and would not require construction or expansion of recreational facilities. There are no parks or recreational facilities within 0.5 miles of the project alignment area, and the nearest recreational area to the project is the Tumey Hills recreation area, which is located approximately 0.8 miles southwest. The project alignment area does not cross or overlap with any recreation areas. As a result, the construction, operation, and maintenance of the project would not affect the scenic, biological, cultural, geologic, or other important characteristics of the Tumey Hills recreation area or any other recreation area. Therefore, the construction, operation, and maintenance of the proposed project would not result in the need to construct new recreational facilities or expand existing facilities, and there would be **no impact**.

3.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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) 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

ROADWAY SYSTEM

The project area encompasses a network of state, county, and city roadways. FHWA classifies urban and rural roadways by road function. The functional classification of roadways defines the role each element of the roadway network plays in serving the transportation system (FHWA 2023). The Fresno County circulation system in the vicinity of the project alignment area is characterized with a rural nature and mainly used for agricultural purposes. The following roadways are located in the vicinity of the project alignment area:

- ▶ Interstate 5 (I-5) is a four-lane north–south interstate highway with two lanes of traffic in each direction. I-5 is located approximately 1 mile east of the substation site. The posted speed limit on I-5 in the project vicinity is 70 miles per hour.
- ▶ State Route 33 (SR 33) is a two-lane north–south state highway with one lane of traffic in each direction. SR 33 is located approximately 0.5 mile east of PG&E's Tranquillity Switching Station. The posted speed limit on SR 33 in the project vicinity is 55 miles per hour.
- ▶ Manning Avenue is an east-west public road located north of the substation site. Manning Avenue would provide access to the substation site at the intersection of Manning Avenue and South Brannan Avenue. Manning Avenue runs parallel to the approximately 7-mile-long proposed PG&E 230 kV Reconductoring and the approximately 12-mile-long proposed LSPGC 230 kV transmission line. The posted speed limit on Manning Avenue in the project vicinity is 50 miles per hour. The roadway transitions to a dirt road approximately 300 feet west of the I-5 exit.
- ▶ Other local roadways in the project vicinity primarily consist of private dirt roads and County-maintained roadways.

RAILWAYS

The San Joaquin Valley Railroad operates 371 miles of rail line throughout Fresno County and Bakersfield (San Joaquin Valley Railroad 2024). The closest railroad line to the project alignment area travels in the southeast direction from the community of Tranquillity to the community of Burrel, approximately 15 miles northeast of the project

alignment area. The nearest train center and Amtrak service lines for passenger service are located over 45 miles east of the project alignment area.

PUBLIC TRANSIT

The Fresno County Rural Transit Agency provides public transit services to the rural communities throughout Fresno County. The transit agency operates scheduled and fixed routes with designated bus stops, as well as a reservation-based service that offers pickup Monday through Friday. The nearest transit stop to the project alignment area is within the unincorporated community of Three Rocks, which is approximately 13 miles southeast of the proposed Manning Substation and 6 miles south of the Tranquillity Switching Station (FCRTA 2019).

BICYCLE AND PEDESTRIAN FACILITIES

There are no designated bicycle or pedestrian facilities in the vicinity of the project alignment area. The nearest bikeway is located approximately 12 miles west of the project alignment area on SR 33. The nearest designated pedestrian pathway is the Panoche Mountain Summit Trail, which is located approximately 16 miles north of the project alignment area.

3.17.2 Regulatory Setting

FEDERAL

Federal Highway Administration

The FHWA, an agency of the U.S. Department of Transportation, provides stewardship over the construction and preservation of the nation's highways, bridges, and tunnels. FHWA also provides technical assistance to state and local agencies to improve safety, mobility, and livability and to encourage innovation in these areas. FHWA also provides regulation and guidance related to work zone safety, mobility, and temporary traffic control device implementation.

STATE

California Department of Transportation

Caltrans is the state agency responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as the segments of the Interstate Highway System in California. Caltrans District 6 is responsible for the operation and maintenance of highways in the project area. Caltrans requires a transportation permit for any transport of heavy construction equipment or materials that necessitates the use of oversized vehicles on state highways, and an encroachment permit for any work in Caltrans ROW.

California Manual on Uniform Traffic Control Devices (MUTCD) "Part 6: Temporary Traffic Control" provides principles and guidance for the implementation of temporary traffic control to ensure the provision of reasonably safe and effective movement of all roadway users (e.g., motorists, bicyclists, pedestrians) through or around temporary traffic control zones while reasonably protecting road users, workers, responders to traffic incidents, and equipment. Additionally, this document notes that temporary traffic control plans and devices shall be the responsibility of the public body or official having jurisdiction to guide road users (Caltrans 2024).

The purpose of the Interim Local Development Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance is to provide instructions to Caltrans personnel, lead agencies, developers, and consultants conducting safety reviews for proposed land use projects and plans affecting the State Highway System. The LDIGR guidance establishes the safety impact review expectations for Caltrans and lead agencies to comply with CEQA; however, it does not establish thresholds of significance for determining safety impacts (Caltrans 2020). The LDIGR guidance can

also be used by lead agencies, developers, and consultants as a model for analyzing the safety impacts of proposed land use projects and plans on local roadways. The LDIGR guidance prioritizes vulnerable users and communities; enhances safety for pedestrians, bicycle, transit, and vehicular modes; and applies both reactive and systemic perspectives.

California Code of Regulations Section 15064.3

On December 28, 2018, State CEQA Guidelines Section 15064.3 was introduced to address the determination of significance for transportation impacts. This amendment mandates that transportation analyses be based on VMT rather than congestion metrics, such as level of service (LOS). The shift in focus was a direct response to legislation, notably SB 743, passed in 2013, that required the Governor's Office of Planning and Research (OPR) to develop new State CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

Following approval by the Office of Administrative Law, the updated State CEQA Guidelines took effect statewide on July 1, 2020, implementing the provisions outlined in State CEQA Guidelines Section 15064.3. As a result, VMT analysis has become a crucial component of project evaluations under CEQA. Therefore, VMT is considered in the analysis of this project.

In December of 2018, the Governor's Office of Land Use and Climate Innovation (LCI), previously Office of Planning and Research, published the most recent version of the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory), which provides guidance for VMT analysis. The 2018 Technical Advisory provides guidance related to screening thresholds for small projects to indicate when detailed analysis is needed or if a project can be presumed to result in a less-than-significant VMT impact. The Technical Advisory notes that projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact, absent substantial evidence indicating otherwise (OPR 2018).

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno Council of Governments

FCOG is a voluntary association of local governments and a regional planning agency composed of 16 member agencies, including Fresno County. FCOG is one of 18 metropolitan planning organizations (MPO) across California. The primary functions of FCOG involve transportation planning and programming. FCOG is responsible for developing and adopting the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) in an effort to meet state goals to reduce greenhouse gas emissions through coordinated land use and transportation planning.

The most recent RTP was adopted by the FCOG board of directors in July 2022. The RTP serves as a blueprint establishing long term goals and policies to meet a regional vision for the future transportation system. The SCS is a state-mandated component of the RTP which requires MPOs to determine an approach to meet greenhouse gas emission reductions through land use and transportation planning strategies. The 2022 RTP includes goals and

policies streamlined to focus on five key policy areas: equity, sustainability and resiliency, infrastructure and safety, economy, and innovation (FCOG 2022).

FCOG SB 743 Regional Guidelines

The FCOG SB 743 Regional Guidelines (2020) provide screening criteria to determine if projects can be screened out of VMT analysis. Projects that satisfy one or more of the following criteria are considered to have a less than significant countywide VMT impact:

- ▶ Projects located in a high-quality transit area and be consistent with the RTP/SCS, have a floor area ratio (FAR) of greater than 0.75, not provide an excessive amount of parking, and may not reduce the number of affordable residential units.
- ▶ Residential and office projects located in a low-VMT zone as identified in the FCOG screening map.
- ▶ Projects consisting of local-serving retail less than 50,000 square feet.
- ▶ Projects that generate a low number of trips (i.e., less than 500 daily trips). It should be noted that 500 daily trips differs from OPRs 110 trip recommendation.
- ▶ Projects with a high level of affordable housing units (as defined by local government).
- ▶ Projects that are institutional/government and/or public services uses (as defined by local government).

Fresno County Regional Active Transportation Plan

The Fresno County Regional Active Transportation Plan (ATP) was adopted in January 2018. The Fresno County ATP serves as a guide for planning and program development involving biking, walking, and other human-powered transportation in the region (FCOG 2018). The Fresno County ATP proposed several projects to build out the active transportation network and meet regional goals to increase safety and walking and bicycling trips. The Fresno County ATP recommends specific improvements for jurisdictions without their own adopted ATPs and reproduces the planned bicycle and pedestrian network maps for the four jurisdictions that had already developed their own ATPs at the time.

Fresno County General Plan

The Fresno County Transportation and Circulation Element includes goals and policies to develop a safe and efficient transportation system for the county (Fresno County 2024). The following policies from the General Plan are relevant to the project:

- ▶ **Policy TR-A.2: Vehicle Miles Traveled (VMT) Standards and CEQA.** The County shall plan and design its roadway system in a manner that strives to meet LOS D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county.
- ▶ **Policy TR-A.4: Roadway Access.** 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.10: Roadway Improvements.** 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.

Fresno County Bicycle Master Plan

The Fresno County Regional Bicycle & Recreational Trails Master Plan provides a long-term vision for the development of a bikeway and recreational trails network that connect cities and unincorporated areas of the county. The plan describes policies that center on coordination with the Fresno County Rural Transit Agency, maintenance and expansion of bikeways, installation of supporting bikeway infrastructure such as water stations, and provision of public information on the bikeway system.

3.17.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APM that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CM that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to transportation.

LSPGC APMs

- ▶ **APM GHG-1: Greenhouse Gas Reduction During Construction.** The following measures will be implemented during construction to minimize greenhouse gas emissions:
 - If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site.
 - On-road and off-road vehicle tire pressures will be inflated to manufacturer specifications; tires will be checked and reinflated at regular intervals.
 - Demolition debris will be recycled for reuse to the extent feasible.
 - Line power, instead of diesel generators, will be used at all construction sites where feasible.
 - Construction equipment will be maintained per the manufacturer's specifications.

PG&E CMs

- ▶ **CM GHG-1: Greenhouse Gas Emissions Reduction During Construction.** The following actions will be taken, as feasible, to minimize greenhouse gas emissions.
 - Encourage construction workers to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the project will depend upon the proximity of carpool facilities to the area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the project's construction schedule.
 - Minimize unnecessary construction vehicle idling time for on-road and off-road vehicles. The ability to limit construction vehicle idling time will depend on the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.
 - Maintain construction equipment in proper working conditions in accordance with PG&E standards.
 - Minimize construction equipment exhaust by using low-emission or electric construction equipment, where feasible. Portable diesel fueled construction equipment with engines 50 hp or larger and manufactured in 2000 or later will be registered under the California Air Resources Board Statewide Portable Equipment Registration Program.
 - Minimize welding and cutting by using compression of mechanical applications (utilizing mechanical pressure to create a secure connection between metal components) where practical and within standards.
 - Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available.
 - Encourage recycling construction waste where feasible.

- ▶ **CM TRA-1: Temporary Traffic Controls.** PG&E will obtain any necessary transportation and encroachment permits from the California Department of Transportation and the local jurisdictions, as required, including those related to state route crossings and the transport of oversized loads and certain materials, and will comply with permit requirements designed to prevent excessive congestion or traffic hazards during construction. PG&E will develop road and lane closure or width reduction or traffic diversion plans as required by the encroachment permits. Construction activities that are in or along or that cross local roadways will follow best management practices and local jurisdictional encroachment permit requirements—such as traffic controls in the form of signs, cones, and flaggers—to minimize impacts on traffic and transportation in the project area.
- ▶ **CM TRA-2: Coordinate Road Closures with Emergency Service Providers.** At least 24 hours prior to implementing any road or lane closure, PG&E will coordinate with applicable emergency service providers in the project vicinity. PG&E will provide emergency service providers with information regarding the road or lanes to be closed; the anticipated date, time, and duration of closures; and a contact telephone number.

3.17.4 Discussion

- a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?**

LSPGC and PG&E Project Components

The project is not a land use development project that would result in increased demand for pedestrian, bicycle, or transit facilities, or increase transit ridership, because there would be no operational activity associated with the project that would generate such trips. As discussed in Section 3.17.1, there are no transit, bicycle, or pedestrian facilities in the project vicinity. Therefore, implementation of the project would not damage or adversely affect any existing transit, pedestrian, or bicycle facilities, or substantially delay public transit. The project would have no impact on a program, plan, ordinance, or policy addressing transit, roadway, or bicycle facilities; create potentially hazardous conditions for those walking, bicycling, or using public transit; interfere with walking or bicycling accessibility; or substantially delay public transit.

Vehicle trips added to area roadways during project construction would be temporary, lasting only during the approximately 27-month construction period. Construction vehicles and equipment would travel along I-5 to Manning Avenue and other County-maintained roads to access the project alignment area. Approximately 140 construction workers would access the project alignment area at the peak of construction. This would equate to approximately 344 round trips per day during construction and be comprised of 64 truck trips and 280 automobile trips. I-5 supports approximately 37,000 vehicles per day at its junction with Manning Avenue. Manning Avenue was estimated to support over 1,000 vehicles per day by the year 2020 (Caltrans 2021; Fresno County 2000); for the purposes of this analysis, it is reasonable to assume that at least 1,000 vehicles are currently supported per day on Manning Avenue. Therefore, project construction traffic would represent less than 1 percent of daily trips on I-5 and less than 35 percent of daily trips on Manning Avenue. Construction trips would not significantly impact traffic flow because construction trips would account for only 34 percent of traffic on the roadway during peak construction times and workers would park in staging areas such that their parked vehicles would not encroach upon public roadways. Therefore, the project would not conflict with the Fresno Council of Governments Regional Transportation Plan, Fresno General Plan, or Fresno County Regional Bicycle and Recreation Master Plan.

The operation of both LSPGC and PG&E project components would require minimal vehicle trips because both project components would be unstaffed and remotely monitored. The Manning Substation would be inspected quarterly, and a small team would perform any needed maintenance activities. Routine maintenance of the LSPGC 230 kV transmission line would require one trip per year by one to four people, and routine maintenance of PG&E components would be incorporated into PG&E's existing maintenance activities for serving the area.

For the reasons explained above, construction and operation impacts on the circulation system would be **less than significant**.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

State CEQA Guidelines Section 15064.3(b)(3) states that a project may be analyzed qualitatively if modeling or methodology does not exist to adequately evaluate a particular project. Additionally, State CEQA Guidelines Section 15064.3(b)(4) allows lead agencies the discretion to choose the most appropriate approach to analyze a project's impacts on VMT. Because the project does not involve any development or land use changes, the VMT analysis herein focuses primarily on construction worker commute trips and maintenance trips associated with project operation and maintenance activities.

LSPGC and PG&E Project Components

Construction

Although different phases of construction would require different numbers of construction personnel, an estimated 140 workers per day are anticipated to be working during peak construction. Peak vehicle round trips during construction would be approximately 344 trips per day, consisting of approximately 64 truck trips and 280 automobile trips. The project would have less than 500 daily trips and would be considered a low trip generating project in accordance with the transportation guidelines established by FCOG (FCOG 2020). In accordance with FCOG's guidelines, low trip generating projects would not result in significant VMT impacts. Therefore, project construction would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3(b).

Implementation of APMs and CMs

APM GHG-1 and CM GHG-1 would encourage carpooling to the jobsite, which could result in a reduction in construction worker VMT. However, because carpooling would not be required, no carpooling is assumed for purposes of this analysis.

Operation and Maintenance

Operation and maintenance of the project would consist of remote operating and monitoring. As detailed in Section 2.10.1, "System Controls and Operation Staff," the project would be unstaffed during operation and maintenance. The proposed Manning Substation would be operated by LSPGC's 24-hour control center in Austin, Texas, entirely remotely, and no new full-time staff would be required for the project. The Manning Substation would be inspected quarterly with a small, specialized team performing more extensive maintenance activities as needed. The LSPGC 230 kV transmission line would require approximately one trip per year by crews of one to four people. Maintenance of the PG&E project components would be incorporated into PG&E's existing maintenance activities in the area. PG&E's local maintenance/technical staff and outside resources would respond to maintenance issues and emergency situations. Therefore, existing utility worker or supplier trips would be to preexisting, modified project components, or new project components that would be co-located with preexisting transmission infrastructure. Therefore, operation and maintenance would not generate a substantial number of new trips (i.e., over 500 trips) or result in a substation increase in VMT.

Conclusion

The project would result in less than 500 trips during construction. Projects with less than 500 daily trips are considered not to have significant VMT impacts in accordance with the transportation guidelines established by FCOG (FCOG 2020). Project operation would consist of minimal trips for maintenance activities and would not generate a substantial number of new trips. Impacts would be **less than significant**.

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

LSPGC Project Components

Construction

Many of the existing paved and unpaved roads in the project area that would be used to access worksites are currently used by large agricultural vehicles and equipment during field preparation, planting, maintenance, and harvesting. Therefore, the project would not introduce incompatible uses from the use of heavy trucks or construction equipment on the surrounding roadways. There are no existing bicycle, transit, or pedestrian facilities in the vicinity of the LSPGC portion of the project. Therefore, project construction would not create potentially hazardous conditions for people walking or bicycling or interfere with walking or bicycling accessibility.

Project construction would require minor modification of existing roadways to provide safe access for construction vehicles and equipment. Specifically, minor grading, vegetation trimming/removal, and the application of road base would occur to support construction vehicles. An unnamed private road south from the intersection of South Brannan Avenue and Manning Avenue would be widened by 20 feet as part of the project to provide access to the proposed Manning Substation (Appendix A Figure 5). A new approximately 900-foot-long and 20-foot-wide driveway would provide permanent access to the Manning Substation (Appendix A Figure 5). Finally, approximately 2,640 feet of new permanent direct access roads would be constructed to connect existing PG&E operation and maintenance areas to the LSPGC project components (Appendix A Figures 1, 2, 4-8, and 10).

LSPGC would be required to obtain an encroachment permit for any construction work that would occur in the public ROW pursuant to Section 13.08.010 of the Fresno County Ordinance Code. The general provisions of a county transportation permit address traffic safety and convenience and require the use of load signs and flags to ensure the safe navigation of roadway users (Fresno County n.d.). The county encroachment permit application would require LSPGC to control traffic consistent with the MUTCD. The general provisions of a county encroachment permit also require that the permittee make, at its own expense, any repairs to the roadway network as deemed necessary by the County Department of Public Works. Compliance with the general provisions of the required encroachment permit would ensure that any disturbed transportation facilities would be returned to their original condition following project construction.

Operation and Maintenance

Following project construction, operation and maintenance of the project would consist of routine inspection, repair, and maintenance activities. Operation and maintenance of the project would consist of remote operating and monitoring. The LSPGC project components would not require any changes to roadways and would not result in any incompatible roadway uses. Project operation and maintenance would not require the construction, redesign, or alteration of any public roadways, and the types of vehicles accessing the project area during operational activities would be similar to those under existing conditions (e.g., heavy-duty vehicles).

PG&E Project Components

Construction

The PG&E portion of the proposed project would require minor grading, vegetation trimming/removal, and the application of road base during project construction. Similar to the LSPGC project components, PG&E would be required to obtain an encroachment permit for any construction work that would occur in the public ROW pursuant to Section 13.08.010 of the Fresno County Ordinance Code. PG&E would be required to implement the same general provisions as described above for LSPGC. Compliance with the general provisions of the required encroachment permit would ensure that any disturbed transportation facilities would be returned to their original condition following project construction.

Implementation of CMs

CM TRA-1 reinforces PG&E's commitment to obtain all necessary jurisdictional encroachment permits and develop a traffic control plan to detail any roadway or lane closures, width reductions, or traffic diversions, as required by jurisdictional encroachment permits. In addition, PG&E would ensure that traffic control operations related to PG&E work are compliant with the MUTCD. The MUTCD establishes principles and guidance for the implementation of temporary traffic control (e.g., warning signs, flaggers) that would ensure the provision of safe and effective movement of all roadway users (e.g., motorists, bicyclists, pedestrians) during construction. Therefore, compliance with permit provisions, as enforced by CM TRA-1, would ensure that PG&E implements proper traffic control measures that would minimize transportation conflicts and hazards during project construction activities in the public ROW.

Operation and Maintenance

Following project construction, operation and maintenance of the project would consist of routine inspection, repair, and maintenance activities. Operation and maintenance activities currently occur for PG&E's existing facilities in the project area, and they would be conducted in the same way for all new, expanded, or modified facilities. Operation and maintenance would not require the construction, redesign, or alteration of any public roadways, and the types of vehicles accessing the project area during operations activities would be similar to those under existing conditions (e.g., heavy-duty vehicles).

Conclusion

The project would not introduce incompatible uses to the roadway network, and all transportation infrastructure improvements would be subject to and designed in accordance with applicable design and safety standards to minimize transportation hazards. The potential for the project to substantially increase hazards due to a design feature or incompatible use would be addressed through compliance with established standards and regulations. The Fresno County encroachment permit would require construction traffic control consistent with the MUTCD to minimize transportation hazards. PG&E compliance with CM TRA-1 would ensure that PG&E would adhere to permit provisions and address any alterations to the transportation network that would result from project construction through a traffic control plan. As a result, the project would not substantially increase hazards due to a design feature or incompatible use. Impacts would be **less than significant**.

d) Result in inadequate emergency access?

LSPGC Project Components

Construction

During construction of the LSPGC portion of the project, the existing network of public and private roads would primarily be used to access stations, structure work areas, and staging areas. Project construction would require minor modification of existing roadways to provide safe access for construction vehicles and equipment. Specifically, minor grading, vegetation trimming/removal, and the application of road base would occur to support construction vehicles. Widening at the intersection of Manning Avenue and South Brannan Avenue would require temporary closure of a lane for up to 1 week. All construction activities in the LSPGC portion of the project would be required to comply with the standards set forth in the 2022 California Fire Code as adopted by reference in Section 15.10.010 of the County Code. Section 3311.1 of the 2022 California Fire Code identifies the minimum requirements for emergency access during construction activities. In addition, LSPGC would obtain an encroachment permit for any construction work that would occur in county ROW. The county encroachment permit application would require LSPGC to control traffic consistent with the MUTCD. Section 6B.01.7D of the MUTCD states that the needs of emergency service providers should be assessed and appropriate coordination made when developing a traffic control plan. Therefore, LSPGC would coordinate any roadway or lane closures with local emergency service providers to ensure adequate emergency access during all construction activities.

Operation

Operation of the LSPGC project components would be monitored remotely with quarterly inspections. Routine maintenance of the LSPGC 230 kV transmission line would require one trip per year by crews of one to four people.

Because of the small crew size and infrequent dispatch, routine maintenance would not alter traffic levels or impede emergency response.

PG&E Project Components

Construction

During construction of the PG&E portion of the project, the existing network of public and private roads would primarily be used to access stations, structure work areas, and staging areas. Project construction would require minor modification of existing roadways to provide safe access for construction vehicles and equipment. Specifically, minor grading, vegetation trimming/removal, and the application of road base would occur to support construction vehicles. Activities such as equipment delivery and stringing wires could temporarily affect traffic on local roads. All construction activities in the PG&E portion of the project would be required to comply with the standards set forth in the 2022 California Fire Code as adopted by reference in Section 15.10.010 of the County Code. Section 3311.1 of the 2022 California Fire Code identifies the minimum requirements for emergency access during construction activities. In addition, PG&E would obtain an encroachment permit for any construction work that would occur in county ROW. The county encroachment permit application would require PG&E to control traffic consistent with the MUTCD. Section 6B.01.7D of the MUTCD states that the needs of emergency service providers should be assessed and appropriate coordination made when developing a traffic control plan. Therefore, PG&E would coordinate any roadway or lane closures with local emergency service providers to ensure adequate emergency access during all construction activities.

Operation

Maintenance of the PG&E project components would be incorporated into PG&E's existing maintenance activities in the area. PG&E's local maintenance/technical staff and outside resources would respond to maintenance issues and emergency situations. PG&E project components would not require any additional operations staff. Therefore, maintenance and operation would not alter traffic levels or impede emergency response.

Implementation of CMs

Through implementation of CM TRA-1, PG&E would obtain any necessary transportation and encroachment permits and comply with permit requirements designed to prevent inadequate emergency access during project activities. CM TRA-1 would require PG&E to develop traffic control plans to detail any road and lane closure or width reduction or traffic diversions as required by the encroachment permits. Therefore, implementation of CM TRA-1 would ensure that emergency access and other needs of emergency service providers would be met consistent with the Fresno County Code. Additionally, through CM TRA-2, PG&E would coordinate any road closures with emergency providers and provide information regarding the roads to be closed, including the anticipated dates and times of closure. Therefore, implementation of CM TRA-2 would ensure that emergency access providers would be able to continue providing services during construction of PG&E project components.

Conclusion

The project would involve the construction of temporary access roads for use during project construction. Project construction would be required to follow standards set forth in the 2022 California Fire Code, as adopted by the Fresno County Code, which require that adequate emergency access is provided to facilities during construction. Implementation of CMs TRA-1 and TRA-2 would also ensure that PG&E would provide emergency access during PG&E project component construction activities, as detailed above. Project operation and maintenance would consist of small crew size, infrequent dispatch, and routine maintenance that would not alter traffic levels or impede emergency response. Impacts would be **less than significant**.

3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.18.1 Environmental Setting

The following ethnographic setting information is based on the *Cultural Resources Assessment for the Manning 500/230KV Substation Project, Fresno County, California*, prepared by Chronicle Heritage (Chronicle Heritage 2024).

ETHNOGRAPHIC SETTING

The project alignment is within the traditional territory of the Northern Valley Yokuts. The Yokuts language is a member of the California Penutian stock that includes four other groups found in central California: Miwok, Costanoan, Maiduan, and Wintuan. Three main groups of Yokuts-speaking people inhabited central California: the Southern Valley Yokuts, the Northern Valley Yokuts, and the Foothill Yokuts.

Large Northern Valley Yokuts occupation sites typically were on low mounds, above flood levels, and near larger bodies of water. The social structure of Southern Valley Yokuts appeared to be based on single-family units, who lived in one principal settlement and periodically left this settlement during the spring floods to move to higher ground or to harvest seasonal resources.

Resources within the Northern Valley Yokuts territory was most abundant near waterways. Fish, mussels, pond turtles, waterfowl, tule elk, pronghorn, jackrabbits, squirrels, and quail were all found in abundance in or near the water. Salmon is noted as a prime source of food in historical accounts of the Southern Valley Yokuts. Acorns from valley oaks and tule roots were ground into a meal and cooked as a thick soup or gruel.

During the Spanish and Mexican Periods (1769–1846), the Northern Valley Yokuts rapidly declined in population. Decreasing Native populations along the coast resulted in the Franciscan friars from Spanish Missions acquiring neophytes from farther and farther inland. Once removed from their villages, Native Americans pressed into the missions were taught new occupations that benefited the mission and became vaqueros, tanners, shoemakers, carpenters, blacksmiths, cooks, servants, fishermen, brick, and tile-makers, tallow-melters, and saddle-makers. Industrial-sized soap works and large spinning and weaving rooms were built at the missions. Native Americans were kept at their assigned tasks and subdued with physical punishment. Many perished because of ill treatment and the introduction of European diseases. Many of the Southern Valley Yokuts were taken to the San Jose, Santa Clara, Soledad, San Juan Bautista, and San Antonio missions. Then in 1833, a virulent malaria epidemic swept Central California, killing an estimated 12,000 Native peoples in the San Joaquin Valley alone.

During the American Period of the mid-nineteenth century, thousands of prospectors descended upon the San Joaquin Valley in search of gold, further spreading disease and inflicting violence on Native peoples. Plans for a reservation were made in 1850, but none of the proposed treaties between the United States and the Californian tribes were ever ratified. In 1853, the Fresno Indian Reservation, also called the Fresno River Farm, was set aside for Native Californian groups, including linguistic Yokuts; however, this reservation only remained open for seven years. In 1873, the Tule River Reservation was created, and thousands of Native peoples were brought there by the Army from throughout the Southern Sierra and Central Valley. Today, many Northern Yokuts people continue to live in the San Joaquin Valley and throughout California.

TRIBAL CONSULTATION

Pursuant to PRC Section 21080.3 (AB 52, Statutes of 2017) and reflecting the CPUC's list of tribes that have requested consultation, the CPUC mailed and emailed a notification letter to one tribal representative on September 17, 2024. The notification letter included a description of the project, maps of the project, and invitation to consult under AB 52. The letter was sent to tribal representative Bob Pennel, Cultural Resources Director of the Table Mountain Rancheria. The tribe responded on September 25, 2024, indicating that they will not consult on the project.

3.18.2 Regulatory Setting

FEDERAL

There are no federal regulations that apply.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the CRHR. The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, State, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

- Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

- Criterion 2. Is associated with the lives of persons important to local, California, or national history.
- Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
- Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP: location, design, setting, materials, workmanship, feeling, and associations.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "[T]ribal cultural resources." PRC Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a [T]ribal cultural resource is a project that may have a significant effect on the environment." PRC Section 21074 states:

- a) "Tribal cultural resources" are either of the following:
 - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the CRHR.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - 2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a Tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a Tribal cultural resource if it conforms with the criteria of subdivision (a).

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "[T]ribal cultural resources," defined in PRC Section 21074. Pursuant to CEQA requirements, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration. CEQA Sections 21080.3.1 and 21080.3.2 state that within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

Health and Safety Code, Section 7050.5

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC).

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies (and has the authority to designate) the most likely descendants (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resource Code Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American human burials falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024) includes the following policies that may be relevant to tribal cultural resources affected by the project:

- ▶ **OS-J.4: Cultural Resources Protection and Mitigation.** The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archeological, tribal, paleontological, and cultural sites and resources. For projects requiring ground disturbance and located within a high or moderate cultural sensitivity areas, a cultural resources technical report may be warranted, including accurate archival research and site surveys conducted by qualified cultural resources practitioners. The need to prepare such studies shall be determined based on the tribal consultation process and initial outreach to local or state information centers.
- ▶ **OS-J.5: Archaeological Sites Confidentiality.** The County shall, within the limits of its authority and responsibility, maintain confidentiality regarding the location of archeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.
- ▶ **OS-J.6: Native American Consultation.** The County shall solicit the views of the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or sites of cultural importance.

3.18.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed APMs that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed CMs that will apply to the PG&E components of the project. There are no specific APMs or CMs related to tribal cultural resources. However, the project includes the following APMs and CMs related to cultural resources which are also applicable to tribal cultural resources.

LSPGC APMs

The following APMs would be implemented for the LSPGC project components:

- ▶ **APM CUL-1: Cultural Resources Awareness Training.** In accordance with this measure, the project's WEAP will 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 project;
 - A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and policies; and
 - A statement by the construction company or applicable employer agreeing to abide by the WEAP, and other applicable laws and regulations.

The WEAP will be provided to all project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in ground-disturbing activities without having participated in the WEAP.

- ▶ **APM CUL-2: Avoid Environmentally Sensitive Areas (ESAs).** Cultural resources surveys will be performed for any portion of the project alignment area not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas). Cultural resources discovered during surveys will be subject to a 50-foot buffer around the boundary of each respective resource and designated as ESAs. Methods of ESAs delineation may include, as applicable, flagging, rope, tape, or fencing. The ESAs shall be clearly marked on all pertinent construction plans. Where operationally feasible, all NRHP- and CRHR-eligible resources would be protected from direct project impacts by project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas). In addition, all historic properties/historical resources will be avoided by all project construction and restoration activities, where feasible. If work within the 50-foot buffer cannot be avoided, then monitoring will be required.
- ▶ **APM CUL-3: Inadvertent Discoveries.** In the event that previously unidentified cultural resources are uncovered during implementation of the project, all work within 50 feet of the discovery will be halted and redirected to another location. A qualified archaeologist(s) will inspect the discovery and determine whether further investigation is required. The qualifications of the archaeologist(s) will be approved by the CPUC. If the discovery can be avoided and no further impacts would occur, the resource will be documented on California Department of Parks and Recreation cultural resources records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, the significance and NRHP and CRHR eligibility of the resource will be evaluated and, in consultation with the CPUC, appropriate treatment measures will be determined. All work will remain halted until a Secretary of the Interior-qualified archaeologist approves the treatment measures. Preservation in place would be the preferred means to avoid impacts on significant historical resources. Consistent with CEQA Guidelines Section 15126.4(b)(3), if it is demonstrated that resources cannot feasibly be avoided, and if the unearthed resource is precontact or Native American in nature, a Native American representative, in consultation with the CPUC, will develop additional treatment measures, such as data recovery consistent with

CEQA Guidelines Section 15126.4(b)(3)(C-D). Archaeological materials recovered during any investigation would be curated at an accredited curation facility or transferred to the appropriate tribal organization.

PG&E CMs

The following CMs would be implemented for the PG&E project components:

- ▶ **CM CUL-1: Worker Environmental Awareness.** PG&E will provide environmental awareness training on archaeological and paleontological resources protection. This training may be administered by the PG&E cultural resources specialist (CRS) or a designee as a stand-alone training or included as part of the overall environmental awareness training as required by the project and will at minimum include: types of cultural resources or fossils that could occur at the project alignment; types of soils or lithologies in which the cultural resources or fossils could be preserved; procedures that should be followed in the event of a cultural resource, human remain, or fossil discovery; and penalties for disturbing cultural or paleontological resources.
- ▶ **CM CUL-2: Flag and Avoid Known Resources.** Sites will be marked with flagging tape, safety fencing, and/or sign designating it as an ESA to ensure that PG&E construction crews and heavy equipment will not intrude on these sites during construction. At the discretion of the PG&E CRS, monitoring may be done in lieu of or in addition to flagging. If it is determined that the project cannot avoid impacts on one or more of the sites, then, for those sites that have not been previously evaluated, evaluation for inclusion in the NRHP/CRHR will be conducted. Should the site be found eligible, appropriate measures to reduce the impact to a less-than-significant level will be implemented, including but not limited to data recovery, photographic and archival documentation, or other measures as deemed appropriate. If it is determined that sites that have been previously determined to be eligible for inclusion in either the NRHP or CRHR cannot be avoided, measures will be implemented to reduce the impact to a less-than-significant level, including but not limited to data recovery, photographic and archival documentation, or other measures as deemed appropriate.
- ▶ **CM CUL-3: Unanticipated Cultural Resource and Paleontological Discoveries:**
 - a. **Unanticipated Cultural Resources.** If unanticipated cultural resources are inadvertently discovered during site preparation or construction activities, work will stop in that area and within 50 feet of the find until the CRS or their qualified designee can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with PG&E and other appropriate agencies. Work may continue on other portions of the site with the CRS's approval. PG&E will implement the CRS's or their designee's recommendations for treatment of discovered cultural resources.
 - b. **Human Remains.** In the unlikely event that human remains or suspected human remains are uncovered during pre-construction testing or during construction, all work within 50 feet of the discovery will be halted and redirected to another location. The find will be secured, and the CRS or designated representative will be contacted immediately to inspect the find and determine whether the remains are human. If the remains are not human, the CRS will determine whether the find is an archaeological deposit and whether paragraph (a) of this APM should apply. If the remains are human, the CRS will immediately implement the applicable provisions in PRC Sections 5097.9 through 5097.994, beginning with the immediate notification to the affected county coroner. The coroner has two working days to examine human remains after being notified. If the coroner determines that the remains are Native American, California HSC 7050.5 and PRC Section 5097.98 require that the CRS contact the NAHC within 24 hours. The NAHC, as required by PRC Section 5097.98, will determine and notify the MLD.
 - c. **Paleontological Discoveries.** If significant paleontological resources are discovered during construction activities, work will stop within 50 feet and the PG&E CRS will be contacted immediately. The CRS will work with a qualified paleontologist to evaluate the discovery. If the discovery is determined to be significant, PG&E will implement measures to protect and document the paleontological resource. Work may not resume within 50 feet of the find until approval by the CRS in coordination with the paleontologist. In the event that significant paleontological resources are encountered during the project, protection and recovery

(if feasible and safe) of those resources may be required. Treatment and curation of fossils will be conducted in consultation with the landowner, PG&E, and the CPUC. The paleontologist will be responsible for developing the recovery strategy and will lead the recovery effort, which will include establishing recovery standards, preparing specimens for identification and preservation, documentation and reporting, and securing a curation agreement from the approved facility.

3.18.4 Discussion

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)?

LSPGC and PG&E Project Components

Construction

Ground disturbance associated with construction or installation of the Manning Substation, access roads, staging areas, TSPs, concrete foundations, and underground fiber cable, as well as vegetation removal and road widening could result in direct impacts on tribal cultural resources if present in the survey area. Tribal cultural resources could be impacted from vehicle and equipment operation, vegetation trimming and removal, soil excavation and compaction, and grading.

The results of the AB 52 consultation did not reveal any tribal cultural resources within the project alignment. In addition, as described in Section 3.5, "Cultural Resources," the records search results did not reveal any precontact archaeological resources within the project alignment area. The results of the pedestrian survey did not identify any precontact archaeological resources that could be considered tribal cultural resources, within the surveyed areas of the project alignment. However, previously unrecorded precontact archaeological resources associated with Native Americans could be impacted by the project and in the areas of the project alignment that have not been surveyed. Additionally, there is potential for project construction to uncover unanticipated tribal cultural resources during ground disturbing activities. If precontact resources are inadvertently discovered during project construction activities or in previously unsurveyed areas, the possibility exists that these could be also a tribal cultural resource.

Operation and Maintenance

Operation and maintenance of LSPGC and PG&E project components would include inspection, maintenance, and repair or replacement of infrastructure and roads, as well as vegetation management (i.e., trimming of vegetation in the area surrounding the project alignment) with hand tools. These levels of activities do not have the potential to result in a substantial change to the level of significance of tribal cultural resources because the level of operation and maintenance are extremely minor with minimal to no ground disturbance.

Implementation of APMs and CMs

To address the potential for construction of LSPGC and PG&E project components to impact tribal cultural resources a WEAP would be developed to train construction personnel on the recognition of identify potential tribal cultural resources during construction, in accordance with APM CUL-1 and CM CUL-1. The WEAP would provide construction personnel with instruction on compliance with APMs, CMs, and mitigation measures developed after pre-construction surveys. Pursuant to APM CUL-2, cultural resources surveys would be conducted prior to construction for any LSPGC areas that were not previously surveyed, which may include areas where landowner permission was not obtained.

Where operationally feasible, all tribal cultural resources would be protected from direct project impacts by redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas) should they be found to be in conflict with the project alignment footprint. APM CUL-3 would be implemented so that in the event that previously unidentified tribal cultural resources are uncovered during excavation, a qualified archeologist would inspect the discovery and determine whether further investigation is required. If the unearthed resource is precontact or Native American in nature, a Native American representative would develop additional treatment measures, such as data recovery consistent with State CEQA Guidelines 15126.4(b)(3)(C–D).

Pursuant to PG&E CM CUL-2, sites would be marked with flagging tape, safety fencing, and/or signs designating them as ESAs to ensure that PG&E construction crews and heavy equipment would not intrude on these sites during construction. At the discretion of the PG&E CRS, monitoring may be done in lieu of or in addition to flagging. CM CUL-3 would also be implemented to ensure that construction activities would temporarily stop within 50 feet of any unanticipated tribal cultural resource discoveries until the CRS can assess the significance of the find.

Significance Before Mitigation

While implementation of APM CUL-2 would reduce impacts on tribal cultural resources by requiring a cultural survey of the project alignment areas that have not been surveyed as well as providing procedures in case of discoveries, the APM only covers LSPGC components. There is potential for tribal cultural resources to occur in previously unsurveyed areas covered by PG&E project components. In addition, APMs CUL-2 and CUL-3 and CMs CUL-2 and CUL-3 lack clarity regarding treatment and preservation of resources.

If tribal cultural resources exist within the unsurveyed areas of the project alignment construction of LSPGC and PG&E project components could have a potential impact on tribal cultural resources. If tribal cultural resources exist within the unsurveyed areas of the project alignment, construction of the proposed project components could damage, destroy, or otherwise cause an adverse substantial change to tribal cultural resources. Therefore, this impact would be significant without mitigation.

Construction Measures and Mitigation Measure

Construction Measure CR-C [PG&E] / Mitigation Measure CR-3 [LSPGC]: Conduct Archaeological Resources Surveys and Avoid Archaeological Resources

See Section 3.5.4 for the full text of Construction Measure CR-C / Mitigation Measure CR-3.

Construction Measure CR-D [PG&E] / Mitigation Measure CR-4 [LSPGC]: For All Ground-Disturbing Construction Activities, Halt Ground Disturbance Upon Discovery of Subsurface Archaeological Features

See Section 3.5.4 for the full text of Construction Measure CR-D / Mitigation Measure CR-4.

Significance after Mitigation

Implementation of LSPGC APM CUL-1 and PG&E CM CUL-1 would require WEAPs to train construction workers to identify tribal cultural resources. In addition, Construction Measures CR-C and CR-D/Mitigation Measures CR-3 and CR-4, which shall supersede and replace APMs CUL-2 and CUL-3, and CMs CUL-2 and CUL-3 for this impact, would require cultural surveys of areas that have not been surveyed and would further require the avoidance of any identified tribal cultural resources, including protective measures in case of an inadvertent discovery. Therefore, substantial adverse changes related to tribal resources are not anticipated and impacts on tribal cultural resources as defined in PRC Section 15064.5 would be **less than significant**.

- 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

See discussion under item "a."

3.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication 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 insufficient 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 that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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) Fail to 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

WATER

The proposed project is located in western Fresno County. The project alignment area is located within the service areas of Westlands Water District (Westlands) in Fresno County. Westlands serves farmers and rural communities in western Fresno County and King County, where Westlands' distribution system utilizes the agricultural conveyance system. Westlands uses a combination of imported surface water, local groundwater, and local surface water to serve its customers. Westlands has no treatment facilities and does not deliver treated water for human consumption (Westlands 2023). The project alignment area is not connected to a public water system. Water provided by Westlands for infrastructure development in its service area is considered municipal and industrial (M&I) water.

Surface water supplies are imported from the Central Valley Project (CVP) using the Delta-Mendota Canal, the San Luis Canal, and the Coalinga Canal. Westlands has an entitlement from CVP to supply 1,195,000 acre-feet (AF) of CVP water annually to more than 700 family-owned farms (Westlands 2024a). Depending on drought conditions and water supply availability in the Bay Delta, the total CVP supply may not be delivered. The net annual CVP water

As discussed in Section 3.10, "Hydrology and Water Quality," the project is located within the Westside Subbasin of the San Joaquin Valley Groundwater Basin. The Westside Subbasin is identified as a high priority subbasin under the Sustainable Groundwater Management Act (SGMA) and in a condition of critical overdraft. Westlands is the primary groundwater sustainability agency (GSA) for the Westside Subbasin and, in this role, prepared a groundwater sustainability plan (GSP) consistent with the requirements of the SGMA (see Section 3.19.2, "Regulatory Setting," for more information). The GSP for the Westside Subbasin projected a sustainable yield of 294,000 acre-feet per year (AFY) based on projected groundwater pumping and decline in projected groundwater storage (Westlands 2022). Groundwater supply to Westlands was 493,000 AF in 2020, 636,000 AF in 2021, 603,000 AF in 2022, and 10,000 AF in 2023. The groundwater supply to Westlands in 2024 was estimated to be 90,000 AF (Westlands 2024b).

WASTEWATER

The project alignment area and its vicinity are primarily agricultural lands. In Fresno County, rural areas, such as the project alignment area, generally use on-site septic systems for wastewater treatment and disposal.

STORMWATER

Stormwater conveyance infrastructure within the project alignment area consists of agricultural ditches. No other human-made drainage facilities are located in the project alignment area.

SOLID WASTE

The project alignment area is located within the service area of the American Avenue Landfill. The American Avenue Landfill is a regional landfill located near the City of San Joaquin, approximately 20 miles northeast of the project alignment area. The American Avenue Landfill accepts various waste types, including tires, mixed municipal, industrial, construction and demolition, asbestos, and agricultural. The landfill has a maximum permitted throughput of 2,200 tons per day, and as of July 2005, it had a remaining capacity of 29,358,535 cubic yards and a cease-operation date of August 31, 2031 (CalRecycle 2024a).

ELECTRICITY AND NATURAL GAS

Electricity and natural gas services in the project alignment area are provided by PG&E. PG&E's existing electrical infrastructure in the project area consists of the Tranquillity Switching Station and multiple transmission line corridors, including the overhead Panoche-Tranquillity Switching Station #1 and #2 230 kV, Los Banos-Midway #2 500 kV, and Los Banos-Gates #1 500 kV transmission lines. Overhead electric distribution lines are also located throughout the project alignment area. The existing electrical infrastructure is shown in Figure 2-2 and discussed in detail in Section 2.4, "Existing System Setting." Multiple PG&E natural gas pipelines are located throughout project alignment area as shown in Figure 3.19-1 (PG&E 2024).

TELECOMMUNICATIONS

Telephone providers in the vicinity of the proposed project alignment include T-Mobile, AT&T, and Verizon. An existing fiber optic cable is located on the parcel adjacent to PG&E's existing Tranquillity Switching Station.

3.19.2 Regulatory Setting

FEDERAL

No federal regulations related to utilities and service systems are relevant to the proposed project.

STATE

Sustainable Groundwater Management Act

In 2014, Governor Brown signed the SGMA into law. The SGMA requires qualified local agencies to establish a governance framework for the managed groundwater basin by forming local GSAs with the authority to develop, adopt, and implement a GSP. The Westside Subbasin has been identified by the California Department of Water Resources (DWR) as a critically overdrafted subbasin. Under the SGMA, critically overdrafted subbasins are required to prepare and be managed under a GSP by January 31, 2020 (Water Code Section 10720.7(a)(1)). The Westside Subbasin GSP has been prepared by Westlands, acting as the GSA, to meet the statutory requirements set forth in SGMA and the regulatory requirements developed by DWR for GSP development and implementation in California Code of Regulations (CCR) title 23, sections 350-358.4 (GSP Regulations).

The purpose of the Westside Subbasin GSP is to characterize groundwater conditions in the Subbasin, to evaluate and report on conditions of overdraft, to establish sustainability goals and sustainability management criteria, and to describe projects and management actions the GSA intends to implement to achieve sustainability by 2040 (Westlands 2022).

National Pollutant Discharge Elimination System Construction General Permit

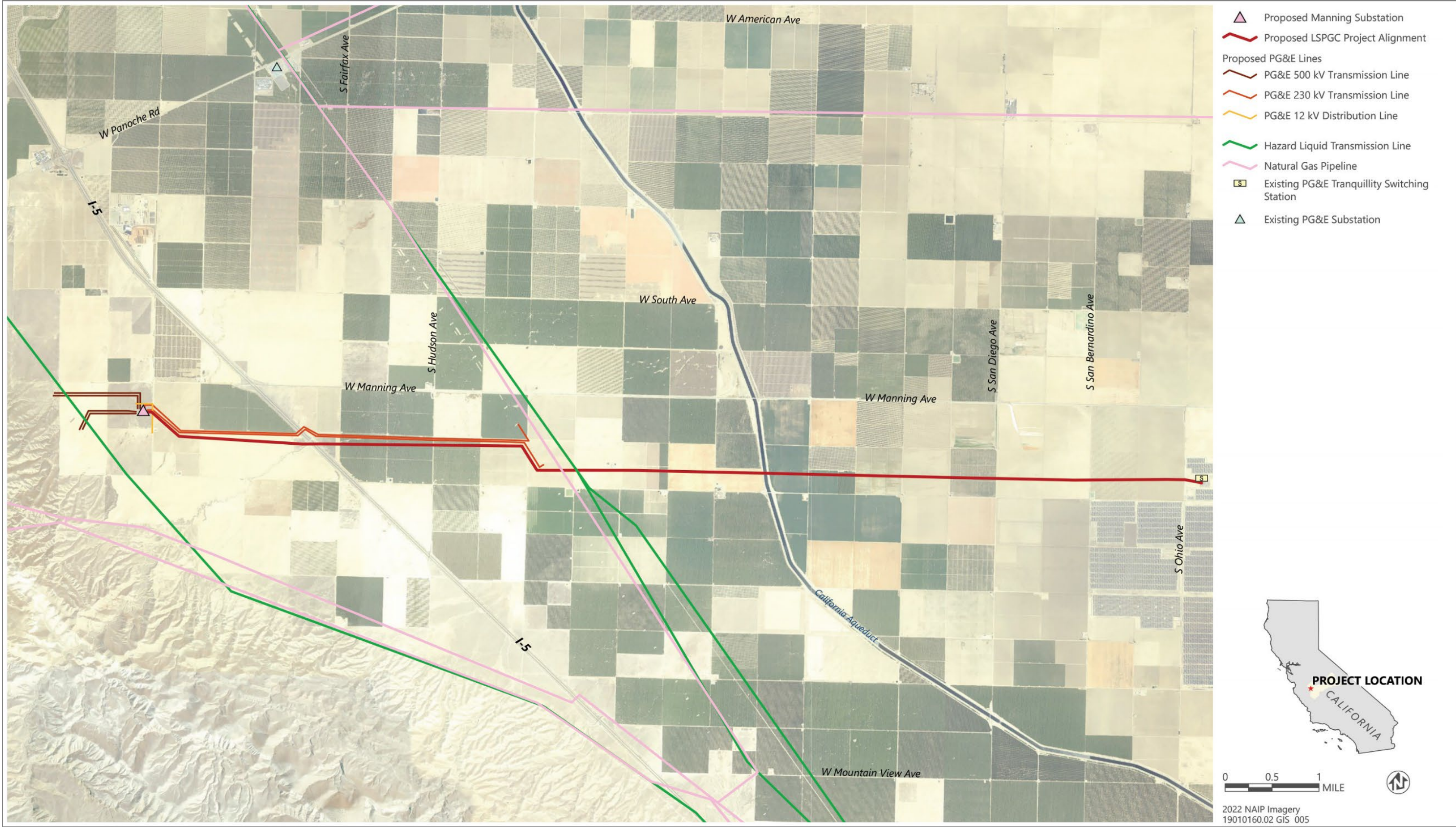
Construction projects disturbing 1 acre or more of land are subject to the permitting requirements of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) and must apply for coverage under the Construction General Permit. For all new projects, applicants must electronically file permit registration documents using the Stormwater Multiple Applications and Report Tracking Systems (SMARTS) and must include a notice of intent (NOI), risk assessment, site map, and SWPPP to be covered by the General Construction Permit before beginning construction. The risk assessment and SWPPP must be prepared by a State-Qualified SWPPP Developer. See Section 3.10, "Hydrology and Water Quality," for a more detailed discussion of water quality and SWPPP requirements. The project applicants would apply for coverage under the Construction General Permit and include implementation of a SWPPP.

California's Integrated Waste Management Act of 1989

The California Integrated Waste Management Act (CIWMA) of 1989 (AB 939) created the California Integrated Waste Management Board, which was subsequently abolished, with its duties now carried out by the California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle is the agency designated to oversee, manage, and track California's 92 million tons of waste generated each year. CalRecycle provides grants and loans to help cities, counties, businesses, and organizations meet the state's waste reduction, reuse, and recycling goals. CalRecycle promotes a sustainable environment in which these resources are not wasted but can be reused or recycled. In addition to many programs and incentives, CalRecycle promotes the use of new technologies to divert resources from landfills. CalRecycle is responsible for ensuring that waste management programs are carried out primarily through local enforcement agencies.

The CIWMA was intended to minimize the amount of solid waste that must be disposed of through transformation and land disposal by requiring all cities and counties to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Later legislation mandates the 50 percent diversion requirement be achieved every year (CalRecycle 2024b).

The 50 percent diversion requirement is measured in terms of per capita disposal expressed as pounds per day per resident and per employee. The per capita disposal and goal measurement system uses an actual disposal measurement based on population and disposal rates reported by disposal facilities, and it evaluates program implementation efforts.



Source: Adapted by Ascent in 2024

Figure 3.19-1 Existing Utilities Infrastructure

California Green Building Standards Code

With the adoption of the 2010 California Green Building Standards Code (CALGreen Code), California became the first state to incorporate green building strategies into its building code. The CALGreen Code comprises Part 11 of the California Buildings Standards Code in Title 24 of the California Code of Regulations. The CALGreen Code outlines mandatory and voluntary requirements for new residential and nonresidential buildings (e.g., retail, office, public schools, hospitals) throughout the state. The development and implementation of the CALGreen Code aims to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to directives by the governor. Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), the CALGreen Code provides strategies to reduce building-related sources of GHG emissions to attain California's 2020 and 2050 goals.

Updated every 3 years, the CALGreen Code was last updated in 2022, effective January 2023. The CALGreen Code was developed to enhance the design and construction of buildings and the use of sustainable construction practices, through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality.

Chapter 4 (Division 4.3) of the 2022 CALGreen Code describes measures to reduce indoor demand for potable water and to reduce landscape water usage. Divisions 4.4 and 5.4 require a minimum of 65 percent of all nonhazardous construction and demolition waste for residential and nonresidential development, respectively, to be recycled or salvaged for reuse. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the collected materials will be taken. In addition, CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

California Code of Regulations Title 22, Division 4.5

Division 4.5 of Title 22 of the California Code of Regulations includes environmental health standards for the identification, collection, transport, disposal, and recycling of hazardous waste. The term "hazardous waste" is defined in Sections 66260.10 and 66261.3 of the regulations to include acutely hazardous waste, extremely hazardous waste, Resource Conservation and Recovery Act (RCRA) hazardous waste, non-RCRA hazardous waste, special waste, and universal waste.

California Government Code

California Government Code Section 4216, under Title 1 Division 5 Chapter 3.1 (Protection of Underground Infrastructure), requires excavators to delineate an excavation area and notify appropriate regional notification centers. The notification must be made at least 2 working days and no more than 14 calendar days prior to excavations if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator. If an excavation is proposed within 10 feet of a high priority subsurface installation, the excavator will be notified by the operator of the high priority subsurface installation of its existence. The excavator and operator must discuss excavation methods and determine actions required to verify the location, and prevent damage to high priority subsurface installation, prior to excavation. The number of subsurface installations must be located and field marked by a qualified person. Excavation may begin only after the excavator receives a response from all known operators of subsurface installations within the delineated boundaries of the proposed excavation area. Any excavation within 24 inches on either side of the field marking requires the excavator to use hand tools to determine the exact location of subsurface installations to prevent damages (USA DOT 2023).

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno County General Plan

The Fresno County General Plan is a comprehensive, long-term framework for the protection of the agricultural, natural, and cultural resources in the county and for development in the county. The following General Plan policies are relevant to the proposed project (Fresno County 2024a):

- ▶ **Policy PF-A.2: Facilities and Services.** The County shall ensure through the development review process that public facilities and services will be developed, operational, and available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the applicant can demonstrate that all necessary public facilities will be installed or adequately financed and maintained (through fees or other means).
- ▶ **Policy PF-A.3: Industrial Infrastructure.** The County shall require new industrial development to be served by community sewer, stormwater, and water systems where such systems are available or can feasibly be provided.
- ▶ **Policy PF-A.5: Underground Utilities.** The County shall encourage the placement of irrigation canals and utility lines underground as urban residential, commercial, and industrial development takes place.
- ▶ **Policy PF-F.1: Solid Waste Source Reduction.** 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.2: Onsite Recycling Storage and Collection.** The County shall require new commercial, industrial, and multi-family residential uses to provide adequate areas on-site to accommodate the collection and storage of recyclable materials.
- ▶ **Policy PF-F.5: County Integrated Waste Management Plan.** The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.
- ▶ **Policy PF-J.1: Existing and Future Utility Demands.** The County shall encourage the provision of adequate gas and electric, communications, and telecommunications service and facilities to serve existing and future needs.
- ▶ **Policy PF-J.2: Gas and Electric Systems.** The County shall work with local gas and electric utility companies to design and locate appropriate expansion of gas and electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual, and other impacts on existing and future residents.

FRESNO COUNTY CODE OF ORDINANCES

Section 8.25.060 of Fresno County's Code of Ordinances prohibits that disposal of construction and demolition debris at the American Avenue and Coalinga landfills. The ban does not apply to loads of construction and demolition debris that conform to the following conditions (Fresno County 2024b):

- A. Individual loads consisting of three cubic yards or less;
- B. Mixed loads where construction and demolition debris represents less than twenty percent of the load;

- C. Loads containing disaster debris resulting from a locally or federally declared disaster;
- D. Loads containing more than fifty percent of construction and demolition debris for which there is no adequate local market infrastructure, as determined by the director of the department of public works and planning or his designee;
- E. Loads that have been pre-processed at a construction and demolition debris processing facility; and
- F. Loads containing non-friable asbestos that meet county guidelines.

FRESNO COUNTY CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING PROGRAM

The Fresno County Construction and Demolition Debris Recycling Program (C&D Debris Recycling Program) (Fresno County 2017) contains the following requirements related to utilities that are relevant to the proposed project:

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 a 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 a project is complete and 14 days prior to the project's final inspection, submit the completed Acknowledgement Form(s), Waste Log, and all supporting documents.

3.19.3 Applicant-Proposed Measures and PG&E Construction Measures

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CMs) that would apply to the PG&E components of the project. The following LSPGC APM is related to utilities and service systems:

- ▶ **APM UTIL-1: Conduct an Induction Study.** An induction study will be conducted to evaluate the potential effects of the proposed project on pipelines in its vicinity. The study will comply with all national and international standards in addition to the following standards:
 - Pipeline Company Standards and Standard Operating Procedures;
 - Federal Department of Transportation Part 192 Regulations;
 - National Association of Corrosion Engineers (NACE) SP0177-2014 Standard Practice;
 - NACE SP21424-2018 Standard Practice; and
 - Institute of Electrical and Electronics Engineers Standard 80 Guide.

The study will model the electrical interference effects on pipelines during different electrical conditions, such as maximum load and fault conditions. Additionally, the study will perform a coating stress voltage and alternating current (AC) density analysis on the pipelines. The induction study will recommend AC mitigation methods based on the findings. Recommendations of the study will be incorporated into the final engineering and design for the proposed project as needed to ensure compliance with applicable standards.

There are no PG&E CMs related to utilities for the proposed project.

3.19.4 Discussion

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

LSPGC and PG&E Project Components

Water

Project construction would require the use of water for dust suppression, compaction requirements, and concrete work. Project decommissioning would similarly require the use of water for dust suppression. It is anticipated that water would be purchased from Westlands or other sources, including private sources that have sufficient supply available for construction and decommissioning. Water would be delivered to the project alignment area by truck. Recycled or reclaimed water would be used during construction and decommissioning, if available. It is estimated that approximately 20 million gallons of water would be needed for dust control, compaction, and concrete work for construction of the LSPGC and PG&E project components. It is assumed that decommissioning water use would be similar to or less than construction water use because water would only be required for dust suppression. Construction and decommissioning crews would be responsible for providing their own potable drinking water. As discussed further in item "b," there would be sufficient water supplies to serve the proposed project. Therefore, the project would not require construction of new or expanded water facilities. Construction of the project would not require any water facilities to be relocated.

Neither the LSPGC nor the PG&E project components require personnel to be frequently present during operation and maintenance. Inspection and maintenance would be performed by LSPGC and PG&E staff on a routine and as-needed basis. Operation and maintenance of the project would not require the use of water.

Wastewater

The project alignment area is in a rural location, and there is no wastewater service currently provided. During construction, portable toilets would be provided for construction workers, likely by Knight's Site Services and United Site Services. It is estimated that 100 to 150 gallons of sanitary waste would be generated per week per every 10 workers during construction. Sanitary waste would be transported by the licensed sanitary waste service providers for off-site disposal at their contracted treatment, storage, and disposal facility. No personnel would need to be frequently present on-site during operations. Inspection and maintenance would be performed by LSPGC and PG&E staff on a routine and as-needed basis. Portable toilets may be brought in for the crew during certain maintenance activities, and wastewater would be disposed of by Knight's Site Services and United Site Services. Therefore, the project would not require the construction of new or the expansion of existing wastewater facilities. Construction of the project would not require any wastewater facilities to be relocated.

Stormwater

Existing stormwater conveyance infrastructure within the project alignment area consists of agricultural ditches. No other drainage facilities that have connectivity to any natural water features are located in the project alignment area. Implementation of the LSPGC and PG&E project components would not relocate existing stormwater facilities. As discussed in Section 3.10, "Hydrology and Water Quality," stormwater would be managed through implementation of project SWPPPs and associated BMPs during construction. No new or expanded stormwater facilities would be required during construction. A detention basin (approximately 3 feet deep, 250 feet wide, and 150 feet long) would be installed on the northeast corner of the substation site. The substation pad would be graded to drain stormwater runoff to perimeter drainage systems that would drain to the detention basin. All stormwater runoff from the Manning Substation would be filtered through the surrounding soil or evaporate during operation and maintenance. The project components other than the Manning Substation would not result in an increase of impervious surface that would result in generation of stormwater runoff, and no facilities would be needed during operation and maintenance.

Electric Power, Natural Gas, and Telecommunication

The proposed project would involve construction and operation of electric power facilities. As discussed in Section 2.6, "Project Overview," the project would involve construction and operation of the Manning Substation and associated LSPGC and PG&E transmission and distribution lines that tie into the new substation. The LSPGC project components would include extension of an existing fiber cable. Construction activities would have the potential to damage or rupture underground utilities lines as shown in Figure 3.19-1 and other unidentified utilities lines. As discussed in Section 2.8.5, "Site Preparation," prior to initiating construction in any given area, LSPGC and/or PG&E would notify all utility companies that have utilities located within or crossing the project right-of-way to locate and mark existing underground utilities along the entire length of the project construction area. In addition, as discussed in Section 3.19.2, "Regulatory Setting," California Government Code Section 4216 requires notifying the appropriate regional notification centers at least 2 working days and no more than 14 calendar days, prior to excavations if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator. Excavation would begin only after the excavator receives a response from all known operators of subsurface installations within the delineated boundaries of the proposed excavation area. The proposed project would not require or result in the construction or relocation of new or expanded electric or telecommunications facilities beyond those analyzed as part of the project.

Alternating current can cause corrosion on buried utility pipelines located near a distribution line if the current density exceeds the design standards for protection of the metallic pipelines. Pipeline design limits (i.e., tolerance) to alternating current are calculated based on the conductance of the metallic material (i.e., steel, ductile iron) and size of the pipeline. Alternating current may cause corrosion on metallic pipelines buried within the roadway that run parallel to the proposed transmission lines during operation and maintenance. The rate of corrosion varies depending on the size and material of the pipeline. Metallic pipelines are more commonly affected by corrosion, but other metallic utilities (e.g., copper communication lines) could also be corroded by alternating current. The proposed project would have the potential to cause corrosion on existing metallic utilities if alternating current from the project exceeded the current density standards on parallel, metallic pipelines, or other utilities, which could require relocation or new construction of utility infrastructure.

Implementation of APMs

LSPGC would implement APM UTIL-1, which requires completion of an induction study to evaluate the potential effects of the proposed LSPGC project components on existing pipelines in the vicinity of the project alignment area. The induction study would include a coating stress voltage and alternative-current density analysis on the pipelines. The study would provide recommendations for alternative current mitigation methods based on the findings of the analysis. The recommendations would be incorporated into the final engineering and design of the proposed project components. Implementation of APM UTIL-1 would ensure that the proposed LSPGC project components would not result in corrosion on existing utilities that could require relocation or new construction of utility infrastructure.

Conclusion

The proposed project would not require or result in the relocation of construction of new or expanded water, wastewater treatment, or stormwater facilities. Compliance with California Government Code Section 4216 would ensure the proposed project would not damage or rupture existing electric, gas, or telecommunication pipelines during construction. Implementation of APM UTIL-1 would ensure that the operation and maintenance of the proposed project would not cause corrosion on existing utilities that could result in relocation or construction of new utilities infrastructure. Implementation of the proposed project would not require new or expanded utilities or the relocation of any utilities. Therefore, this impact would be **less than significant**.

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

LSPGC and PG&E Project Components

As discussed under item "a," it is estimated that approximately 20 million gallons (approximately 61 AF) of water would be used during construction of the proposed project for dust construction, compaction, and concrete work.

The approximately 61 AF water demand during the 27-month construction would be purchased from Westlands or other sources, including private sources that have sufficient supply available for construction. Between 2020 and 2023, the net CVP water supply to Westlands ranged from 3,822 AF and 259,520 AF. During the same period, Westlands also sourced between 10,000 AF and 636,000 AF of water from groundwater sources. The estimated 2024 CVP water and groundwater supply to Westlands would be approximately 593,000 AF and 90,000 AF, respectively (Westlands 2024b). The approximately 61 AF water demand for project construction would constitute a small fraction of the water supply to Westlands. In addition, construction water demand would be purchased from private sources, if required. The proposed project would not require water during operation and maintenance. Therefore, there would be sufficient water supplies available to serve the proposed project during normal, dry, and multiple dry years. This impact would be **less than significant**.

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

LSPGC and PG&E Project Components

The proposed project is located in a rural area outside of a municipal wastewater sphere of influence. It is anticipated that portable toilet facilities would be provided for construction and decommissioning workers during construction by Knight's Site Services and United Site Services. It is estimated that 100 to 150 gallons of sanitary waste would be generated per week per every 10 workers during construction. There would not be personnel required to be present during operation and maintenance. If required, portable toilets would be brought to site during certain maintenance activities by Knight's Site Services and United Site Services. Sanitary waste would be transported by the licensed sanitary waste service providers for off-site disposal at their contracted treatment, storage, and disposal facility, which would be managed and maintained consistent with state and County requirements to ensure that the amount of sanitary waste generated would not exceed the capacity and availability of private licensed providers within the region. Therefore, this impact would be **less than significant**.

- 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?**

LSPGC and PG&E Project Components

The proposed project is expected to generate waste materials such as vegetation debris, metal, and plastic. It is estimated that approximately 2,750 cubic yards of construction debris would be generated from all project components. Approximately 101.85 cubic yards of construction debris per month would be generated during the 27-month construction period. The proposed project would be subject to the CALGreen Code and the Fresno County C&D Debris Recycling Program, which are intended to assist the County in compliance with the CIWMA's solid waste reduction goals. Materials such as metal and wood would be separated from the waste stream and recycled to the extent feasible.

The project alignment area is located within the service area for the American Avenue Landfill. The landfill has a maximum permitted throughput of 2,200 tons per day, and as of July 2005, it had a remaining capacity of 29,358,535 cubic yards and cease-operation date of August 31, 2031 (CalRecycle 2024a). The proposed project would generate 2,750 cubic yards of construction debris during the 27-month construction period. Solid waste generated by the proposed project would represent less than 1 percent of the remaining capacity of the American Avenue Landfill. The American Avenue Landfill would have adequate capacity to accept the solid waste generated from project construction.

During operation and maintenance, the project would generate minimal solid waste due to the frequency (as needed) and nature of the maintenance activities. All solid waste would be disposed of to the appropriated waste management facility and in accordance with all applicable state and local regulations.

Based on the discussion above, the proposed project would not contribute significantly to the impairment of solid waste reduction goals or generate waste in excess of state or local standards. This impact would be **less than significant**.

e) **Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

LSPGC and PG&E Project Components

The proposed 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 CIWMA's solid waste reduction goals. The Fresno County C&D Debris Recycling Program requires building permit applicants to recycle a minimum of 65 percent of nonhazardous waste, scrap, and debris generated by work covered under the building permit. As described in Section 2.8.12, "Waste Generation and Management," most of the waste generated during construction and demolition would be nonhazardous. Waste would be recycled when feasible, and nonrecyclables would be placed into dumpsters located on site. Operation and maintenance of the project would generate a minimal amount of waste from infrequent inspection and maintenance activities, which would include packing materials associated with replacement parts and operational equipment maintenance spoils. Excess material or waste from repairing or replacing structures or equipment would be reused, recycled, or disposed in accordance with federal, state, and local statutes and regulations. Project construction and operation would comply with the construction and demolition debris recycling program by diverting, repurposing, or recycling nonhazardous waste to the maximum extent feasible, in compliance with the local requirements. This impact would be **less than significant**.

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No
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 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"/>

3.20.1 Environmental Setting

The following environmental setting summarizes results reported in a wildfire analysis report prepared by LSPGC for the project and reviewed by Ascent (CloudFire 2023). The wildfire analysis report is provided as Appendix G.

The topography in the proposed project alignment area consists of generally flat land and gently sloping hills, ranging in elevation from approximately 200 to 800 feet above sea level. Western Fresno County is predominantly agricultural, with some semirural residential developments scattered around the landscape. Most habitat located along the proposed project alignment area consists of agricultural land. Vegetation consists primarily of agriculture dominated by orchards; landscaping associated with rural residences; riparian habitat associated with creeks and streams; annual grasslands in pastures along roadsides and in other undeveloped, disturbed areas; and ruderal habitat in highly disturbed areas.

The California Department of Forestry and Fire Protection (CAL FIRE) identifies Fire Hazard Severity Zones (FHSZs) at the local, state, and federal level, all of which cover fire-prone areas in the state regardless of land ownership or responsibility. According to mapping conducted by CAL FIRE and the CPUC, the proposed project alignment area has a low risk for wildland fire. The proposed project alignment area is located within both Local Responsibility Area (LRA) and State Responsibility Area (SRA) lands. All project components east of Interstate 5 (I-5) in Fresno County are located entirely within LRA lands, and the western portion of the proposed project alignment is located in SRA lands. FHSZs in SRAs and LRAs are shown in Figure 3.20-1.



Source: Adapted by Ascent in 2024

Figure 3.20-1 Wildfire Hazard Severity Zones

As shown on Figure 3.20-1, the project alignment area west of I-5 is not located within a High Fire Hazard Severity Zone (HFHSZ) or Very High Fire Hazard Severity Zone (VHFHSZ) in the SRA (CAL FIRE 2024). The nearest CAL FIRE–designated HFHSZs are located approximately 1 mile north of the proposed Manning Substation and approximately 1 mile north of the other PG&E and LSPGC project components (CAL FIRE 2024). In addition, according to the CAL FIRE Fire Hazard Severity Zone Viewer, there are no portions of the project alignment area within an identified fire hazard severity zone (CAL FIRE 2024).

The CPUC has adopted fire hazard mapping most recently with its *High Fire-Threat Map* in 2021, which designates fire-threat areas that require enhanced fire safety. Both the LSPGC and PG&E project components are located outside of any mapped fire hazard zones on CPUC's *High Fire-Threat Map*. For the main project components within Fresno County, the nearest CPUC-designated fire zone is designated as a Tier 2 Zone and is located approximately 11 miles south of the project alignment area (CPUC 2021).

The potential risk of wildfire to occur in the project alignment area is considered low due to the cultivated landscape, maintained mostly with agricultural lands.

WILDLAND URBAN INTERFACE

The wildland-urban interface (WUI) is the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Communities adjacent to and surrounded by wildland are at varying degrees of risk from wildfires. The proposed project extends through areas where the predominant WUI classifications are low and housing density is very low (CloudFire 2023). This means that there are few rural residences in the project vicinity that could be exposed to fire risk.

FIRE RISK

The topography in the area consists of generally flat land and gently sloping hills, ranging in elevation from approximately 200 to 800 feet above sea level. The vegetation within and surrounding the project alignment area is primarily agricultural.

The windier part of the year in the project vicinity occurs during the wetter months, between May 1 and October 1, with average wind gusts up to 40 miles per hour (mph). Temperatures during the summer reach over 100 degrees Fahrenheit with the minimum relative humidity below 20 percent (CloudFire 2023).

The predominant surface fuels in the project alignment area are agricultural crops, grass, and broadleaf litter. West of the project alignment area, fuels are primarily grass and grass-shrub. Fire risk modeling performed for the project alignment area indicates that along the project right-of-way, spread rate and flame length are expected to be low. Flame length and spread rate southwest of the proposed project are considerably higher, but the predominant wind direction and fire history indicates that the probability of a fire igniting in the project alignment area and spreading to these locations is low (CloudFire 2023).

3.20.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to wildfire are applicable to the project.

STATE

California Building Code

The California Building Standards Code (CBC) (California Code of Regulations, Title 24) provides minimum standards for the design and construction of buildings and structures in California. Minimum standards are organized under Part 1 to 12 and include code standards for buildings, mechanical, plumbing, energy, historical buildings, fire safety, and green building standards. State law mandates that local government agencies enforce these regulations. Title 24 is applicable to all occupancies, or structures, throughout California, whether or not the local government takes an affirmative action to adopt Title 24.

California Fire Code

The California Fire Code (CFC), in Part 9 of Title 24 of the CCR, provides standards related to the construction, maintenance, and use of buildings. Topics addressed in the CFC include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazard safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The CFC contains specialized technical regulations related to fire and life safety.

California Public Resources Code

The California Public Resources Code (PRC) provides regulations to enhance safety with regard to the operation and maintenance of electrical transmission lines. The PRC includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify the 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.

Specifically, Sections 4292, 4293, and 8387 of the PRC address vegetation management in transmission line corridors as follows:

- ▶ **PRC Section 4292:** This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. An approximately 10-foot radius around such structures must remain clear of vegetation for the entirety of the fire season.
- ▶ **PRC Section 4293:** This section requires specific clearances between conductors and vegetation. As the line voltage increases, the clearance radius also increases. In addition, some trees must be removed if they pose the potential to fall on an electrical transmission line and cause damage.
- ▶ **PRC Section 8387:** This section requires that the local publicly owned electric utility or electrical cooperative prepare an annual wildfire mitigation plan which includes how to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of wildfire posed by those electrical lines and equipment.

CPUC General Order 95: Rules for Overhead Electric Line Construction

GO 95 regulates the design, construction, operation, and maintenance of overhead electric lines in California. This order includes safety standards such as minimum conductor ground clearance, electric line inspection requirements, and vegetation clearance requirements. Rule 35 (Tree Trimming) defines minimum vegetation clearances around distribution lines and requires 10 feet of radial clearances for any conductor of a line operating at more than 110,000 volts and less than 300,000 volts. This rule also requires that utility providers remove dead, rotten, and diseased trees that overhang or lean toward a span of an electric line. Rule 31.2 (Inspection of Lines) requires that lines be inspected frequently to ensure that they are in good condition and that lines temporarily out of service be inspected and maintained to prevent a hazard.

CPUC GO 166: Standards for Operation, Reliability, and Safety during Emergencies and Disasters

GO 166 applies to all electric utilities subject to the jurisdiction of the CPUC and addresses electric service reliability and safety. The purpose of this order is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters to minimize damage and inconvenience to the public that may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. Investigations required by this order are conducted following every major outage, pursuant to and consistent with Public Utilities Code Section 364(c) and CPUC policy.

LOCAL

The CPUC has sole and exclusive state jurisdiction over the siting and design of the project. Pursuant to CPUC 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.

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county regulations are not applicable as Fresno County does not have jurisdiction over the project. Although Fresno County has no discretionary action related to the project, the County would provide necessary permits, such as encroachment and grading permits. Therefore, local plans and policies are considered for informational purposes.

Fresno-Kings Unit Strategic Fire Plan

The 2023 Fresno-Kings Unit Strategic Fire Plan facilitates the development of a wide range of management prescriptions, using programs and tools available to the unit for protecting assets at risk. These tools include fuels reduction, ignition management, fire-safe engineering activities, code development and enforcement, public education, and forest health enhancements to protect public and private assets (Fresno-Kings Unit 2023).

Fresno County Hazard Mitigation Plan

The Fresno County Hazard Mitigation Plan is a multi-jurisdictional hazard mitigation plan to protect the resources and people in Fresno County from the effects of hazardous events (Fresno County 2024a). The plan documents Fresno County's hazard mitigation planning process and identifies relevant hazards and vulnerabilities to help the County increase resiliency. The plan also describes the extent of wildfire risk in Fresno County, past wildfire occurrences, and policies to address wildfire risk.

Fresno County Master Emergency Services Plan

The Fresno County Office of Emergency Services prepared the 2017 Master Emergency Services Plan to serve as a guide for responding to extraordinary situations that may constitute a State of Emergency, as defined by state law, 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. The plan describes mitigation, preparedness, response, and recovery concepts to help guide emergency and disaster planning. The plan does not describe or recommend specific evacuation routes within the county. However, it includes general recommendations for facilities suited for use as public shelters, such as using public schools and community centers. Hazard-specific response plans and standard operating procedures are in the process of being developed to supplement the Master Emergency Services Plan.

Fresno County General Plan

The Health and Safety Element (Fresno County 2024b) includes goals and policies that aim to protect the community from risks associated with wildfire hazards in the county. The following policies from the General Plan are relevant to the project:

- ▶ **Policy HS-B.1: Fire Hazards Review.** The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.
- ▶ **Policy HS-B.5: Landscape Features.** In consultation with the local fire agency and CalFire, the County shall require structures to be sited to maximize low-flammability landscape features to buffer against wildfire spread. Consultation with the local fire agency will be necessary to make this determination.
- ▶ **Policy HS-B.9: Community Fire Breaks Coordination.** The County shall require that community fire breaks be coordinated with overall fire break plans developed by CalFire and local foothill and mountain fire agencies for Very High Fire Hazard Severity Zones and State Responsibility Areas. Firebreak easements in subdivisions of more than four parcels or in built-up areas shall include access for firefighting personnel and motorized equipment. Easements shall be dedicated for this purpose.
- ▶ **Policy HS-B.10: Fire Agency Review of Development Proposals.** The County shall refer development proposals in the Very High Fire Hazard Severity Zones and State Responsibility Areas of the unincorporated county to the appropriate local fire agencies for review of compliance with fire safety standards. If dual responsibility exists, both agencies shall review and comment relative to their area of responsibility. If standards are different or conflicting, the more stringent standards shall apply.
- ▶ **Policy HS-B.13: Water Storage.** The County shall permit development only within areas that have adequate water resources available, to include water pressure, onsite water storage, or fire flows.
- ▶ **Policy HS-B.14: Minimum Fire Flow Water Systems.** The County shall require new discretionary development to have water systems that meet fire flow requirements as determined by applicable California Fire Code requirements and/or National Fire Protection Association (NFPA) standards under the authority of the Chief Fire Code Official and as referenced in County Ordinance Code. Where minimum fire flow is not available to meet these standards, alternate fire protection measures, including sprinkler systems and on-site water supply or storage, shall be identified, and may be incorporated into development if approved by the appropriate fire protection agency. The County shall require that all public water providers maintain the long-term integrity of adequate water supplies and flow to meet fire suppression needs.
- ▶ **Policy HS-B.15: Fire Protection.** The County shall ensure that any new development will have adequate fire protection, including proximity to adequate emergency services, adequate provisions for fire flow and emergency vehicle access and fire hardened communication, including high speed internet service.

APPLICABLE MITIGATION PLANS

LSPGC Wildfire Mitigation Plan

LSPGC developed a 2023-2025 Wildfire Mitigation Plan (WMP) for its California facilities in 2023. The primary goal of the WMP is to describe how LSPGC will construct, maintain, and operate its electrical equipment in a manner that will keep customers and communities safe by minimizing the risk of wildfire (LSPGC 2023). The WMP includes objectives for 3- and 10-year time periods. Objectives include grid design, vegetation management and inspections, situational awareness and forecasting, emergency preparedness, and community outreach and engagement.

PG&E Wildfire Mitigation Plan

PG&E developed a 2023-2025 WMP in 2023. PG&E's objective for the 2023-2025 WMP is to use risk-informed decision making to minimize ignition risk and outage impacts. The WMP includes a balanced portfolio of mitigation initiatives centered around comprehensive monitoring and data collection, operational mitigation strategies, and system resilience that work together to reduce wildfire risk and strengthen the resiliency of PG&E's electric distribution and transmission systems and reduce impacts of public safety power shutoff events (PG&E 2024).

PG&E 2019 Wildfire Safety Plan

The 2019 Wildfire Safety Plan describes the wildfire safety strategies and programs that are specifically intended to address PG&E's unique geographic 70,000-square-mile service area. To develop the plan, PG&E extensively analyzed

wildfire risk factors to determine which factors have the highest incident rates and potential fire spread characteristics and the potential additional operational actions, enhancements to existing programs, and other measures that will most effectively address those risks (PG&E 2019).

3.20.3 Applicant-Proposed Measures and PG&E Control Measures

LSPGC has developed applicant-proposed measures (APMs) that are incorporated into the LSPGC components of the project. Similarly, PG&E has developed construction measures (CMs) that would apply to the PG&E components of the project. The project includes the following APMs and CMs related to wildfire:

LSPGC APMs

- ▶ **APM FIRE-1: Construction Fire Prevention Plan.** A proposed project-specific construction fire prevention plan (CFPP) will be prepared and submitted to the CPUC for review prior to initiation of construction. The CFPP will be fully implemented throughout the construction period and would include, at a minimum, the following:
 - The purpose and applicability of the plan.
 - Responsibilities and duties.
 - Preparedness training and drills.
 - Procedures for fire reporting, response, and prevention that include the following:
 - Identification of daily site-specific risk conditions.
 - The tools and equipment needed on vehicles and to be on hand at sites.
 - Reiteration of fire prevention and safety considerations during tailboard meetings.
 - Daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible activity.
 - Coordination procedures with federal and local fire officials.
 - Crew training, including fire safety practices and restrictions.
 - Method(s) for verifying that all Plan protocols and requirements are being followed.

A proposed project fire marshal or similarly qualified position will be established to enforce all provisions of the CFPP and perform other duties related to fire detection, prevention, and suppression for the proposed project. Construction activities will be monitored to ensure implementation and effectiveness of the CFPP.

PG&E CMs

- ▶ **CM FIRE-1: Fire Risk Management.** PG&E will follow its standard fire risk management procedures, including:
 - Safe work practices, training, and fire response.
 - Proposed project personnel will be directed to park away from dry vegetation.
 - During fire season in designated State Responsibility Areas and Local Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federally approved or State-approved spark arrestors.
 - All off-road vehicles will be equipped with a backpack pump (filled with water) and a shovel.
 - Fire-resistant mats and/or windscreens will be used when welding. In addition, during fire "red flag" conditions (as determined by CAL FIRE), welding will be curtailed.

- Every fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C (i.e., fire extinguisher to extinguish a Class B fire [flammable liquid or gas] and Class C fire [electrical fire]), and all flammable materials will be removed from equipment parking and storage areas.
- Coordinate procedures with federal and local fire officials.
- Identification of daily site-specific risk conditions.

3.20.4 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

LSPGC and PG&E Project Components

As described above, there are two applicable emergency plans in unincorporated Fresno County. The Fresno County Hazard Mitigation Plan analyzes the risk posed to people and property by natural hazards and considers policies that the County and participating cities could implement before such events to reduce the risk to life and safety and the risk of property damage and service disruption caused by these natural hazards (Fresno County 2024a). The Fresno County Master Emergency Services Plan outlines responses to extraordinary situations that may constitute a State of Emergency (Fresno County 2017). The Hazard Mitigation Plan and Master Emergency Services Plan do not describe or recommend specific evacuation routes within the county. However, the project alignment area is not located within a VHFHSZ, and the area is sparsely populated. Any lane closures would be temporary and coordinated with Fresno County and/or the California Department of Transportation (Caltrans). Furthermore, all construction activities would be required to comply with the standards set forth in the 2022 California Fire Code, which identifies minimum requirements and general hazard standards to provide required emergency access during construction activities. Operation and maintenance activities for both LSPGC and PG&E project components would occur infrequently with a small crew. The Manning Substation would be operated remotely. Therefore, no permanent physical alterations to the roadway network would occur during construction or operation, and the project would not impair emergency evacuation. Impacts would be **less than significant**.

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?

LSPGC and PG&E Project Components

No project components are located within a VHFHSZ. However, project components west of I-5 would be located in SRA. The topography along the project alignment area is generally flat with an average grade of less than 1 percent (CloudFire 2023). Fire risk would be higher along the portion of the project alignment west of I-5 due to increased fuels and slope west of the substation site. Fire risk east of I-5 along the project alignment area would be low because there are sparse fuels and it is generally flat. Prevailing winds can reach up to 40 mph gusts in the project vicinity; however, the predominant wind direction to the east and fire history of the area indicate an overall low fire risk (CloudFire 2023). Project-related construction, decommissioning, and operation and maintenance activities would be limited in duration and the only activities that could produce a spark, fire, or flames would be from equipment and vehicles. Furthermore, the proposed Manning Station would be fenced, resulting in minimal combustible areas. Fire risk attributable to the proposed overhead transmission lines are addressed under item "c," below.

Implementation of APMs and CMs

LSPGC would implement APM FIRE-1, which includes preparation of a project-specific Construction Fire Prevention Plan (CFPP) for LSPGC project components. The CFPP would be prepared and submitted to the CPUC for review prior to the initiation of construction. The CFPP would be fully implemented throughout the construction period and would detail the purpose and applicability of the plan; outline the responsibilities and duties of construction personnel; require preparedness training and drills; describe procedures for fire reporting, response, and prevention; and include daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible

activity. In addition, the CFPP would involve coordination procedures with federal and local fire officials; crew training; and methods for verifying that all plan protocols and requirements are being followed. A project fire marshal or similarly qualified position would be established to enforce all provisions of the CFPP and perform other duties related to fire detection, prevention, and suppression for the LSPGC project components. Construction activities would be monitored to ensure the effective implementation of the CFPP.

During construction, PG&E would implement CM FIRE-1, requiring workers to follow standard fire risk management procedures to reduce the wildland fire risk of PG&E project components in the project alignment area. Through CM FIRE-1, construction crews would be trained in and follow safe work practices and carry out fire response procedures, if necessary. Project personnel would be directed to park away from dry vegetation; all motorized equipment driving off paved or maintained gravel/dirt roads would have federally approved or state-approved spark arrestors during fire season in designated SRA lands; and all off-road vehicles would be equipped with a backpack pump (filled with water) and a shovel. Moreover, fire-resistant mats and/or windscreens would be used when welding, and welding would be curtailed during fire "red flag" conditions (as determined by CAL FIRE). Finally, every fuel truck would carry a large fire extinguisher with a minimum rating of 40 B:C; all flammable materials would be removed from equipment parking and storage areas; construction workers would coordinate work procedures with federal and local fire officials; and site-specific fire risk conditions would be identified on a daily basis for PG&E project components.

Conclusion

The project alignment area has a low risk of wildland fire based on mapping conducted by CAL FIRE and the CPUC. Although the portion of the project alignment area west of I-5 is located in SRA lands, there are no project components located in or near land classified as VHFHSZ, and the topography of the area consists of generally flat land with minimal vegetation for fuel. Implementation of APM FIRE-1 and CM FIRE-1 would further reduce wildland fire risk during construction. Therefore, this impact would be **less than significant**.

- c) **Require the installation 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?**

LSPGC and PG&E Project Components

The LSPGC and PG&E project components would require the installation and maintenance of electrical infrastructure, including new overhead transmission and distribution lines, that could pose a wildfire ignition risk. Project construction activities, including laying down temporary access roads and installing new electrical and communication infrastructure, may exacerbate wildfire risk resulting from the use of equipment that contains combustible materials, such as fuels and oils, which could create sparks during use. However, LSPGC and PG&E would comply with all applicable California Health and Safety Codes and ordinances regulating the handling, storage, and transportation of hazardous materials, which would help minimize the potential for accidental conditions, including fire. The design for each structure would adhere to CPUC GO 95. In addition, the project would be subject to PRC Sections 4292 and 4293, which provide specifications, including wildfire specifications, and clearance standards for projects. The substation site would be fenced, and the area inside the fence would be cleared of vegetation, which would reduce fire risk. No permanent roads would be required outside of the Manning Substation driveway, nor would any other fuel breaks or other utilities be required that could exacerbate fire risk or that could result in temporary or ongoing impacts on the environment. Furthermore, although the project alignment area west of I-5 is in SRA lands, none of the LSPGC or PG&E project components are located within or near lands classified as VHFHSZ, and fire risk in the vicinity of the project alignment is considered low (CloudFire 2023). Finally, new and modified LSPGC and PG&E electrical infrastructure would be similar in nature to existing electrical infrastructure and would result in a negligible increase in the potential for wildfire risk compared to existing conditions within the project alignment area.

Implementation of APMs and CMs

LSPGC would implement APM FIRE-1, which includes preparation of a project-specific Construction Fire Prevention Plan (CFPP). The CFPP would be prepared and submitted to the CPUC for review prior to the initiation of

construction. The CFPP would be fully implemented throughout the construction period for LSPGC project components and would detail the purpose and applicability of the plan; outline responsibilities and duties of construction personnel; require preparedness training and drills; describe procedures for fire reporting, response, and prevention; and include daily monitoring of the red flag warning system with appropriate restrictions on types and levels of permissible activity. In addition, the CFPP would include coordination procedures with federal and local fire officials, crew training, and methods for verifying that all plan protocols and requirements are being followed. A project fire marshal or similarly qualified position would be established to enforce all provisions of the CFPP and to perform other duties related to fire detection, prevention, and suppression for the LSPGC project components. Construction activities would be monitored to ensure the effective implementation of the CFPP.

During construction, PG&E would implement CM FIRE-1, requiring workers to follow standard fire risk management procedures to reduce the wildland fire risk in the project alignment area for PG&E project components. Through CM FIRE-1, construction crews would be trained in and follow safe work practices and carry out fire response procedures, if necessary. Project personnel would be directed to park away from dry vegetation; all motorized equipment driving off paved or maintained gravel/dirt roads would have federally approved or state-approved spark arrestors during fire season in designated SRA; and all off-road vehicles would be equipped with a backpack pump (filled with water) and a shovel. Moreover, fire-resistant mats and/or windscreens would be used when welding, and welding would be curtailed during fire "red flag" conditions (as determined by CAL FIRE). Finally, every fuel truck would carry a large fire extinguisher with a minimum rating of 40 B:C; all flammable materials would be removed from equipment parking and storage areas; construction workers would coordinate work procedures with federal and local fire officials; and site-specific fire risk conditions would be identified on a daily basis for PG&E project components.

LSPGC would implement wildfire prevention practices in the LSPGC WMP, and PG&E would implement wildfire prevention practices in the PG&E WMP. Such wildfire prevention practices include completing vegetation inspections and identifying and removing fire-fuels such as dead trees or underbrush that may have accumulated near project components. Therefore, LSPGC and PG&E would be required to maintain acceptable clearances around project components.

Conclusion

The project alignment area has a low risk of wildland fire based on mapping conducted by CAL FIRE and the CPUC. LSPGC and PG&E project components would not be located within or near lands classified as VHFHSZ. However, project construction activities, including work areas, staging areas, laydown areas, and temporary access associated with installation of the electrical and communication infrastructure, could cause a temporary increase in fire risks from overland travel, the use of equipment that may create sparks, and construction equipment and vehicles, which would contain combustible materials, such as fuels and oils, and ignition sources. Construction and operation and maintenance of the project in accordance with established procedures and regulations would limit the potential for installation and monitoring activities of electrical infrastructure to generate fire ignition risk. Implementation of APM FIRE-1 and CM FIRE-1 would further reduce wildland fire risk in the project alignment area during construction. Therefore, this impact 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?**

LSPGC and PG&E Project Components

Construction and operation of the project would not 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 because there are few structures or residents in the project vicinity that would be impacted following a wildfire. As discussed in more detail in Section 3.7, "Geology and Soils," the existing topography of the project alignment area is relatively flat (less than or equal to 1-percent slope) and is not susceptible to landslides. In addition, the relatively flat nature of the project alignment area would not result in post-fire slope instability or substantial runoff. As described in Section 3.10, "Hydrology and Water Quality," portions of the project area are located within Flood Hazard Zone A

with a 1-percent change of flooding. However, the project would comply with the conditions of the NPDES General Permit requirements, including implementation of a SWPPP, which would help reduce stormwater runoff during construction. In addition, the proposed substation site would include a detention basin to capture stormwater. Therefore, construction and operation of the project would not expose people or structures to significant downslope or downstream flooding or landslides, stormwater runoff, post-fire slope instability, or drainage changes. There would be **no impact**.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. 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 an endangered, rare, or threatened species, 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.21.1 Discussion

- 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

As discussed throughout this IS/MND, the proposed project has been designed to avoid and minimize environmental effects through the integration of APMs and CMs. For residual environmental effects that would be potentially significant, mitigation measures are identified. With the implementation of mitigation measures identified throughout the IS/MND, the project would not result in significant environmental impacts.

As discussed in Section 3.4, "Biological Resources," implementation of LSPGC APMs BIO-1 through BIO-20 and AIR-2, as well as PG&E CMs BIO-1 through BIO-8, GEN-1, and AIR-2 and Construction Measures BIO-A through BIO-K and Mitigation Measures BIO-1 through BIO-10, would ensure that the project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

As discussed in Section 3.5, "Cultural Resources," implementation of LSPGC APMs CUL-1 through CUL-3, PG&E CMs CUL-1 through CUL-3, and Construction Measures CR-A through CR-D and Mitigation Measures CR-1 through CR-4

would prevent the project from significantly affecting previously undiscovered resources or eliminating important examples of the major periods of California history or prehistory. Therefore, the potential of the project to potentially degrade the environment is considered **less than significant with mitigation**.

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

As presented throughout this Initial Study, the project would result in less-than-significant impacts or impacts that are mitigated to less-than-significant levels. Impacts on special status plant species shall be avoided through LSPGC APMs BIO-1 through BIO-20 and AIR-2, as well as PG&E CMs BIO-1 through BIO-8, GEN-1, and AIR-2 and Construction Measures BIO-A through BIO-K and Mitigation Measures BIO-1 through BIO-10. The potential disturbance to special status plants, blunt-nosed leopard lizard and other special status reptiles, western spadefoot toad, special status and native birds, Crotch’s bumble bee, and Tulare grasshopper mouse shall be avoided through Construction Measures BIO-A through BIO-K and Mitigation Measures BIO-1 through BIO-10 to survey for and avoid these species if found on or near the project alignment area. Additional cultural resources analysis is required to determine if there are known archaeological or tribal cultural resources at the site. The potential for unknown materials to be disturbed is addressed through implementation of Construction Measures CR-A through CR-D and Mitigation Measures CR-1 through CR-4. These measures require LSPGC and PG&E to complete historical resources surveys of unsurveyed areas, protect and avoid historical resources, complete archaeological surveys of unsurveyed areas, avoid archaeological resources, and halt ground disturbance upon discovery of archaeological resources during construction. The mitigation measures would ensure that impacts would not occur to cultural resources. Therefore, cumulatively considerable impacts would be **less than significant with mitigation**.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Potential adverse effects to human beings would occur due to project-related construction impacts related to criteria air pollutant emissions, hazardous materials, and noise. As discussed in Section 3.3, “Air Quality,” with implementation of Construction Measure AQ-A/Mitigation Measure AQ-1 project air quality emission would not be in excess of the BAAQMD thresholds for ROG, NO_x, PM₁₀, or PM_{2.5}, which are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. The project would not expose sensitive receptors to substantial pollutant concentrations or generate other emissions that would adversely affect a substantial number of people.

As described in Section 3.13, “Noise,” project construction would not result in substantial noise at nearby receptors during daytime or nighttime hours with implementation of Mitigation Measure N-1 for LSPGC to reduce construction noise at nearby noise sensitive receptors during nighttime construction. Operation of the project would result in minimal noise at nearby sensitive receptors and would not adversely affect human beings.

There are no known hazards on the project site that would impact human beings. Therefore, potential adverse effects on human beings as a result of the project would be **less than significant with mitigation**.

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Mandatory Findings of Significance

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