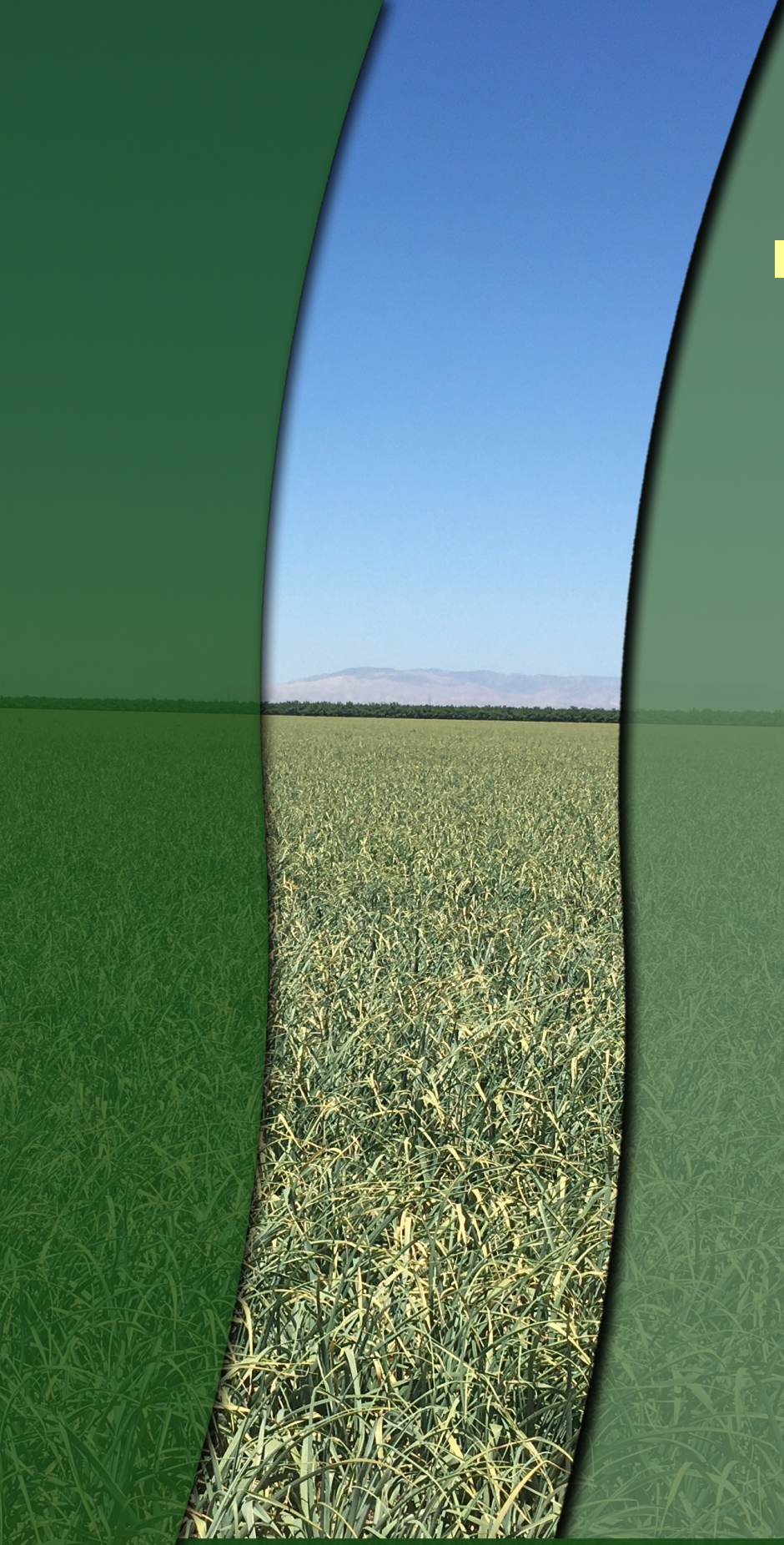

DRAFT
Environmental Impact Report for the San Luis West Solar Project

CUP 3781
EIR 8542

Lead Agency:

Fresno County
Department of Public Works and Planning

2220 Tulare Street, 6th Floor
Fresno, California 93721

August 2025

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

DRAFT ENVIRONMENTAL IMPACT REPORT

SAN LUIS WEST SOLAR PROJECT

August 2025

Lead Agency:

Fresno County
Department of Public Works and Planning
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Appendix D – Visual Impact Assessment, San Luis West Solar Project

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Appendix F – Air Quality and Greenhouse Gas Technical Report, San Luis West Solar Project

Appendix G – Biological Resources Evaluation Report, San Luis West Solar Project

Appendix H – Burrowing Owl Survey Report, San Luis West Solar Project

Appendix I – Wetlands Delineation Report, San Luis West Solar Project

Appendix J – Negative Phase I Archaeological Survey Report, San Luis West Solar Project

Appendix K – Geology and Soils Report, San Luis West Solar Project

Appendix L – Water Supply Assessment, San Luis West Solar Project

Appendix M – Sound Analysis Report, San Luis West Solar Project

Appendix N – San Luis West Solar Project Traffic Impact Study

LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
AB	Assembly Bill
AC	Alternating Current
AE	Exclusive Agriculture (Fresno County Zoning Designation)
AF	acre-feet
AFY	acre-feet per year
AIA	American Institute of Architects
APN	Assessor's Parcel Number
BESS	Battery Energy Storage System
BLM	Bureau of Land Management
BMP	Best Management Practice
BMS	Building Management System
BSA	Biological Study Area

Term	Definition
BUOW	Burrowing owl
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBB	Crotch bumble bee (Bombus crotchii)
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CUP	Conditional Use Permit
CVP	Central Valley Project
CWA	Clean Water Act
dBA	A-weighted decibels
DC	Direct Current
DEIR	Draft EIR
DOC	California Department of Conservation

Term	Definition
DPM	diesel particulate matter
DWR	California Department of Water Resources
ECORP	ECORP Consulting, Inc.
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FRA	Federal Responsibility Area
GHG	greenhouse gas
GIS	Geographic Information Systems
GSA	General Services Administration
GSP	Groundwater Sustainability Plan
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
HVAC	Heating, ventilation, and air conditioning
IBA	Important Bird Area
ISO	International Organization for Standardization
ITP	Incidental Take Permit
KOP	Key Observation Point
LCFS	Low Carbon Fuel Standard
LESA	Land Evaluation and Site Assessment
LOS	Level of Service
LRA	Local Responsibility Area
LU	Land Use
m	meter(s)
MBTA	Migratory Bird Treaty Act
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration

Term	Definition
MSL	Mean Sea Level
MW	Megawatt
MWh	Megawatt hour
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic and Safety Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	nitric oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	Noise Sensitive Area
NWI	National Wetlands Inventory
O&M	Operations and Maintenance
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OS	Open Space
PG	California-Professional Geologist
PG&E	Pacific Gas and Electric Company
PM_{10}	Particulate Matter Less than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns in Diameter
POI	Point of Interconnection
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
Project	San Luis West Solar Project
PV	photovoltaic
ROG	Reactive Organic Gases
ROW	Right-of-Way

Term	Definition
RPA	Registered Professional Archaeologist
RPS	Renewable Portfolio Standards
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition System
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Sacred Lands File
SME	Subject Matter Expert
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure Plan
SR	State Route
SRA	State Responsibility Area
SSC	California Species of Special Concern
SSJVIC	Southern San Joaquin Valley Information Center
SWHA	Swainson's hawk
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	Tribal cultural resource
UCUP	Unclassified Conditional-Use Permit
UL	Underwriting Laboratories
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

Term	Definition
VRI	Visual Resource Inventory
WEAP	Worker Environmental Awareness Program
WL	State Watch List
WSA	Water Supply Assessment
ZEV	Zero Emission Vehicle

EXECUTIVE SUMMARY

This section includes a brief description of the need for action, brief descriptions of the alternatives, a summary table, and a description of the decision to be made. The summary table provided herein summarizes all of the potential impacts identified in this Draft Environmental Impact Report (EIR) by topic and lists the corresponding mitigation measures and the level of significance after mitigation.

ES.1 Introduction

This summary provides a synopsis of the Draft EIR prepared for the San Luis West Solar Project (Project) in compliance with the California Environmental Quality Act (CEQA). Fresno County (County) is the CEQA Lead Agency for the EIR and, as such, has the primary responsibility for evaluating the environmental effects for the Proposed Project and considering whether to approve the Proposed Project in light of these effects.

As required by CEQA, this Draft EIR:

- describes the Proposed Project, including its location, objectives, and features;
- describes the existing conditions at the Project Area and nearby environs;
- analyzes the direct, indirect, and cumulative adverse physical effects that would occur on existing conditions should the Proposed Project be implemented;
- identifies feasible means of avoiding or substantially lessening the significant adverse effects of the Proposed Project;
- provides a determination of significance for each impact after mitigation is incorporated; and
- evaluates a reasonable range of feasible alternatives to the Proposed Project that would meet the basic Project's objectives and reduce a Project-related significant impact.

This Executive Summary covers the following topics:

- *Project Description*;
- *Areas of Controversy/Issues* raised by agencies and the public; and
- *Issues to Be Resolved*, including significant environmental effects and the consideration of alternatives to the Proposed Project.

This Draft EIR and its appendices are available for review on the County's website at https://www.fresnocountyca.gov/Departments/Public-Works-and-Planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/environmental-impact-reports/San-Luis-West-Solar-EIR-8542 and at the Fresno County Public Library located at 2420 Mariposa Street, Fresno, CA 93721. In addition, a physical copy is available for review by the public during business hours at Fresno County Department of Public Works and Planning (2220 Tulare Street, 6th Floor, Fresno, CA 93721).

ES.2 Project Location and Setting

The Project Area is located in the southern part of Unincorporated Fresno County, about 40 miles south-southwest of the City of Fresno and 3 miles south of the City of Huron. It is within the U.S. Geological Survey Huron and Guijarral Hills 7.5-minute topographic quadrangles. The Project Area is located south of West Tractor Avenue, west of the California Aqueduct, and east of Interstate (I) 5; at its closest point, it is approximately 3 miles northwest of the Kings County boundary. Agricultural land and a network of unnamed agricultural roads are located to the south. The Project Area extends to the south and approximately 3 miles east of the Pacific Gas and Electric Company (PG&E) Gates Substation, which is located at the intersection of South Trinity Avenue and West Jayne Avenue. -The surrounding land uses consist primarily of agricultural. The Project Area includes seven parcels, which are identified by the following Assessor's Parcel Numbers:

- 075-070-54S
- 085-050-84S
- 085-050-01S
- 078-080-55
- 078-060-85S
- 085-050-48S
- 085-050-47S

ES.3 Project Background

California is in the midst of generational-scale transformation in the way it produces energy, with coal, nuclear, and other forms of thermal generation increasingly being retired in favor of low-cost, non-emitting wind and solar. Although much of this transformation is being driven by economics, with solar increasingly showing up in utility procurements as the lowest-cost resource, policy is also playing a significant role. In particular, former Governor Jerry Brown signed Senate Bill 100 into law on September 10, 2018, which codified the State's intent to decarbonize its electrical grid by mandating that 100 percent of the State's retail electricity sales be derived from zero-carbon and eligible renewable resources by 2045.

The Project's primary objective is to generate and deliver low-cost, clean renewable energy to the electrical grid operated by PG&E for regional consumption. In addition to low-cost renewable energy, the Project will help support California's Resource Adequacy (RA) needs. RA means having enough generation capability to supply the grid at all hours of the year, which includes having sufficient reserves on-hand to account for unanticipated changes in electrical demand, weather conditions, and generator outages. In recent years, achieving RA during the early evening hours as the sun is setting and the State's solar resources go offline has become increasingly challenging for California's grid operator—the California Independent System Operator. By incorporating robust amounts of battery storage, the Project will help contribute to RA by storing excess solar generation and making it available for use during peak hours when resources are strained.

The Project will also help support economic and workforce development, which is particularly important as the State seeks to recover from the devastating economic impacts of the shutdowns in the face of COVID-19. The Applicant selected the Project Area based on its previously disturbed nature and proximity to existing electrical infrastructure. The Project has been designed in accordance with State and Fresno County regulations.

ES.4 Description of Proposed Project

San Luis West Solar, LLC (Applicant) proposes to construct and operate the San Luis West Solar Project (Project or Proposed Project). The Proposed Project would consist of a 125-megawatt (MW) solar photovoltaic (PV) electric generation facility coupled with an estimated 30 MW Battery Energy Storage System (BESS). The PV portion of the facility would produce electricity by way of the PV effect, which uses a semi-conductor material to convert photons from the Sun into electrons, for injection into the electrical grid operated by PG&E. The BESS portion of the facility would store electricity either generated by the solar panels or from the PG&E grid. In either case, the BESS would make the stored energy available for discharge during periods of peak electrical load.

Key Project components consist of PV modules (solar panels), collection and interconnection line systems, BESS components, a new substation, a gen-tie line, access roads, and other minor components, including fencing and lighting. The Project would include approximately 770 acres of solar panels and associated infrastructure, including the new substation, BESS, Operations and Maintenance (O&M) building, and other associated equipment such as overhead and underground medium-voltage collection lines.

The Project would be located on seven parcels that total approximately 1,400 acres within the AE-20 and AE-40 (Exclusive Agriculture) zoning districts of unincorporated Fresno County (County). Project infrastructure would also include approximately 10 additional acres of transmission easement for underground and overhead medium-voltage collection lines situated along and within existing farm roads. The Project Area, which encompasses all areas of temporary and permanent impacts, is approximately 1,100 acres.

The County permits utility-scale energy projects with an Unclassified Conditional-Use Permit (CUP) within Exclusive Agriculture zoning districts.

ES.4.1 Project Layout

The Project would include a solar-energy-generating facility, power inverters and transformers (Direct Current [DC] to Alternating Current [AC] electricity) or power-conditioning stations, an onsite substation, a BESS, and a connection to the PG&E-owned Gates Substation. The Project Area consists of three separate Subareas, which are herein referred to as Subareas A, B, and C.

- *Subarea A* would include approximately 280 acres of solar panels and associated infrastructure (i.e., internal roads, medium-voltage collection lines, a substation, a BESS, and an O&M building) located on four parcels that total approximately 800 acres. Of the 800 acres, approximately 650 acres are currently leased by the Project, and the remaining 150 acres are owned by the Project. Subarea A is located to the southeast of the existing PG&E Gates Substation, immediately south of West Jayne Avenue, and approximately 0.5 mile west of State Route (SR) 269. The proposed substation would also be located within Subarea A; it is anticipated that the BESS would be co-located with the substation in Subarea A. Two temporary laydown areas that total approximately 10 acres would be located within Subarea A, along West Jayne Avenue.

- *Subarea B* would include approximately 250 acres of solar panels and associated infrastructure (i.e., internal roads and medium-voltage collection lines) on one parcel, which consists of approximately 300 acres of leased land. Subarea B is bordered by SR-269 to the west, West Jayne Avenue to the south, and active row crops to the east.
- *Subarea C* would include approximately 240 acres of solar panels and associated infrastructure (i.e., internal roads and medium-voltage collection lines) on two parcels, which consist of approximately 325 acres of leased land. Subarea C is located to the immediate west of the California Aqueduct and is bisected by West Jayne Avenue.

ES.4.2 Operating Hours and Personnel

Once constructed, the Project would be operated remotely, 7 days per week and 365 days per year. The Project would be outfitted with a suite of sensors, monitoring equipment, and communications gear as part of the Project's Supervisory Control and Data Acquisition System. This allows the Project to be monitored remotely and in real time by Origis Energy's remote operations center in Austin, Texas, which is a new, state-of-art remote monitoring center designed to provide continuous operations support in accordance with National Electric Reliability Corporation standards. The remote operators would be continually aware of plant output, voltage, and local weather conditions and would receive real-time alerts in the event of abnormal operating conditions, allowing the operators to dispatch technicians as needed.

Onsite O&M activities would consist of responding to abnormal operating conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance (i.e., vegetation control). These activities are anticipated to require one to two site visits per month; the visits would be conducted by a small ground crew. Although the solar portion of the Project operates during daylight hours, it is anticipated that the Project as a whole would operate continuously (24 hours per day, 7 days per week); certain electrical connections within the Project may remain charged at night, and the BESS portion of the Project Area, when charged, can discharge at any time.

ES.4.3 Site Access

It is anticipated that primary access to the Project Area would originate via I-5 (Exit 325) to West Jayne Avenue—a paved County road that features one lane of traffic in each direction (east and west). From there, traffic would travel eastbound along West Jayne Avenue to the Proposed Project Area. Access may also be provided from SR-269, which runs north–south near the center of the Project Area. A network of existing agricultural roads within the Project Area will be utilized for ingress and egress during construction. No road improvements are currently proposed as a part of the Project, unless required by the County. I-5 is the only major transportation route near the Project Area. I-5 runs from north to south, connecting Southern California to Northern California and the Pacific Northwest. Other highways in the vicinity of the Project Area include SR-269, which runs north–south and connects the City of Avenal to the north to the community of Huron; and West Jayne Road, which spans the central valley from east to west. Most roadways in the immediate Project vicinity consist of unpaved agricultural roads.

ES.5 Areas of Controversy

Section 15123 of the State CEQA Guidelines requires the summary of an EIR to include areas of controversy known to the Lead Agency, including issues raised by agencies and the public. The County prepared and distributed a Notice of Preparation (NOP), in accordance with Section 15082 of the State CEQA Guidelines. The 30-day public review period for public agencies, organizations, and interested individuals to review and comment on the NOP began on November 21, 2024 and ended on December 23, 2024. The County also held a public scoping meeting on December 5, 2024 virtually via Microsoft Teams.

During this scoping period, nine comment letters were received. The primary issues raised were in regard to agricultural resources, air quality, biological resources, cultural resources, hydrology, water quality, and transportation. A summary of all comments received is included in Table 1-1 of Chapter 1.0, and all comment letters are included in Appendix A of this Draft EIR.

ES.6 Project Alternatives

To fully evaluate the environmental effects of projects, CEQA mandates that alternatives to a project be analyzed. Section 15126.6 of the CEQA Guidelines requires the discussion of "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project" and the evaluation of the comparative merits of the alternatives. The alternatives discussion is intended to "focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project," even if these alternatives would impede to some degree the attainment of project objectives.

The following alternatives are analyzed in detail in Chapter 5.0 Alternatives. The primary purpose of the alternatives analysis is to consider and analyze a reasonable range of feasible alternatives in sufficient detail to foster informed decision-making and public participation in the environmental review process. The alternatives to the Proposed Project are summarized below.

Alternative 1 – No Project

CEQA requires a No Project Alternative to discuss and analyze potential impacts that would occur if the Project is not implemented. Under the No Project Alternative, the Project Area would remain under current pre-Project conditions and would continue its agricultural use.

Alternative 2 – Reduced Intensity

The Proposed Project, as designed, would temporarily and permanently affect 1,100 acres of seven parcels that total 1,400 acres. The Project would include approximately 770 acres of solar panels and associated infrastructure, which include the new Project substation, BESS, O&M building, associated equipment, and transmission easement areas for underground and overhead medium-voltage collection lines. Alternative 2 would reduce the Project's intensity by 25 percent, which would reduce the Project Area to approximately 577.5 acres of solar panels and associated infrastructure from the original 770 acres. The

total 125 MW capacity under Alternative 2 would be reduced to approximately 94 MW, with a 23 MW BESS.

ES.7 Issues to be Resolved by the Lead Agency

This Draft EIR examines the potential environmental effects of the Proposed Project, including information related to existing site conditions, analyses of the types and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. In accordance with Appendix G of the State CEQA Guidelines, the potential environmental effects of the Proposed Project were analyzed for the following areas:

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

ES.8 Summary of Impacts and Mitigation Measures

Table ES-1, below, provides a summary of the abovementioned environmental impacts that could result from the Proposed Project and feasible mitigation measures that would reduce or avoid the significant impacts. For each impact, Table ES-1 identifies the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after the implementation of mitigation measures.

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
3.1 Aesthetics				
Substantial Adverse Effect on a Scenic Vista	No designated scenic vistas are located within visible distance of the Project Area.	No Impact	No mitigation is required.	No Impact
Substantially Damage Scenic Resources	The Proposed Project would convert agricultural land that contributes to the scenic qualities of views. The proposed solar arrays would have a low profile and would not be visible from I-5 due to the intervening vegetation and structures.	Less than Significant	No mitigation is required.	No Impact
In Nonurbanized Areas, Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Surroundings; In Urbanized Areas, Conflict with Applicable Zoning and Other Scenic Quality Regulations	Development of the Project would include construction activities such as the clearing and grubbing of existing vegetation, grading of access roads, and installation of Project components. These visual changes would be transient and short term in nature. Completion of the Project would introduce many new visual elements into the Project Area, including solar Project components consisting of modules, tracking system and posts, overhead collector lines, Project Substation, access and service roads, fencing, gates, security lighting, O&M building, and a BESS. Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the surrounding agricultural land. Where the views of the Project are not blocked by adjacent orchards, travelers along these roadways would have a short duration of viewing the Project Area and are expected to have a low viewer sensitivity to the visual changes in the Project Area. Temporary changes are associated with the decommissioning phase and the removal of all equipment associated with the Project. These visual impacts would be short-term in nature and are not considered to be significant. After the equipment-removal activities, the Project Area will be returned to substantially the same condition as prior to development.	Less than Significant	No mitigation is required.	Less than Significant
Create New Source of Substantial Light or Glare	The Project will provide external safety lighting for both normal and emergency conditions at the primary access points. Lighting will be designed to provide the minimum illumination needed to achieve safety and security and will be downward facing and shielded to focus illumination in the immediate area. All lighting will be subject to County approval and compliance with County requirements. With the application of anti-reflective coatings, the Project would display overall low reflectivity.	Less than Significant	No mitigation is required.	Less than Significant
3.2 Agriculture and Forestry Resources				
Covert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance	Approximately 1,091 acres of the Project Area is listed as Prime Farmland. Project analysis conservatively assumes the entire 1,100-acre Project Area would be converted to non-agricultural use for a minimum of 35 years. Construction and operation of the Project would take the Project's acreage out of production for at least 35 years. However, construction and operation of the Proposed Project would not adversely affect any of the environmental characteristics of the site that qualify it for mapping as Prime Farmland on the basis of its Storie Index Rating.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
Conflict with Existing Zoning for Agricultural Use or Williamson Act contract	The Project Area is located in the County's AE-20 and AE-40 zones. Within these zoning districts, the County permits utility-scale solar energy uses with an Unclassified Conditional Use Permit (CUP). Solar energy facilities are therefore considered to be a compatible use. The Project parcels are subject to Williamson Act Contracts and have been petitioned for cancellation by the landowners as part of the Project. Approval of the Petition for Cancellation would be required prior to development of the Project; if the Fresno County Board of Supervisors determines that cancellation of the contract is to the public benefit (per Government Code §51282[a]). No proximate non-contracted land exists within a 4-mile radius of the Project Area. In the absence of the determination that cancellation of Project Williamson Act contracts is to the public benefit (per Government Code §51282[a]), this is considered a potentially significant impact requiring mitigation.	Potentially Significant	**AG-1:** **Payment of Agricultural In-Lieu Mitigation Fee.** The Applicant shall pay an "Agricultural In-Lieu Mitigation Fee" in the amount of 30 percent of the fair market value per acre for the total acres of the proposed site based on five comparable sales of land used for agricultural purposes as of the effective date of the permit, including program costs on a cost recovery/time and material basis. The Agricultural In-Lieu Mitigation Fee, shall be placed in a trust account administered by the Fresno County Agricultural Commissioner's office and shall be used for such purposes as the acquisition, stewardship, preservation and enhancement of agricultural lands within Fresno	Less than Significant
Conflict with Existing Zoning or Rezoning of Forest Land, Timberland, or Timberland Production	The Project Area is located in the AE-20 and AE-40 zones. The entirety of the Project Area does not contain any land defined as forest land, timberland, or land zoned Timberland Production (as defined by Government Code Section 51104(g)).	No Impact	No mitigation is required.	No Impact
Result in Loss of Forest Land or Conversion to Non-Forest Use	The entirety of the Project Area does not contain any land defined as forest land. Therefore, there would be no loss of forest land or conversion of forest land to non-forest use.	No Impact	No mitigation is required.	No Impact
Other Changes Resulting in Conversion of Farmland to Non-Agricultural Use or of Forest Land to Non-Forest Use	The Project will not result in the removal of adjacent contracted land from agricultural use. The operation of the Project would not affect adjacent properties under Williamson Act land use contracts. The Project would not result in indirect impacts on adjacent agricultural lands that could occur with the conversion of the site from agricultural uses to non-agricultural uses. The Project would include the development and adherence to a Pest Management Plan to ensure that the Project Area does not harbor pests or vectors that could interfere with the surrounding agricultural uses. The Applicant will comply with County requirements associated with County's right to farm ordinance. The Applicant will work cooperatively with farming operations in the vicinity of the Project Area to ensure that the Project would be a compatible use within the surrounding agricultural landscape.	Less than Significant	No mitigation is required.	Less than Significant
3.3 Air Quality				
Conflict with an Applicable Air Quality Plan	The Project would not result in a long-term increase in the number of trips or increase the overall vehicle miles traveled in the area. Worker vehicle trips, vendor trucks, and haul trucks would be generated during the proposed construction activities but would cease after construction is completed. Emissions of nitric oxides (NOx) during construction would not exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) significance threshold. Compliance with Rule 9510 would reduce NOx emissions from the Project through the use of Tier 4 engines for equipment greater than 50 horsepower, as required by Mitigation Measure AQ-1. These reductions are well above Rule 9510 reduction requirements.	Potentially Significant	**AQ-1** During all construction activities, all diesel-fueled construction equipment greater than 50 horsepower including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be California Air Resources Board (CARB) Tier 4 Certified as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Violate any Air Quality Standard or Contribute to an Existing or Projected Air Quality Violation*	Emissions generated during Project construction and operations would not exceed the SJVAPCD significance thresholds for any pollutants, both with and without reductions. Additionally, traffic associated with operations would be negligible and would not result in carbon monoxide hotspots at intersections.	Less than Significant	No mitigation is required.	Less than Significant
Result in a Cumulatively Considerable Net Increase of a Criteria Pollutant	The Project results in an increase in short-term emissions related to construction and an increase in long-term operational emissions for those pollutants and precursors (reactive organic gases [ROG] and NOx) for which the SJVAPCD is in nonattainment. However, the cumulative emissions associated with the Project would not be considerable as the emissions would not exceed any SJVAPCD thresholds. Additionally, the Project would not conflict with the SJVAPCD attainment plans, which address cumulative emissions in the San Joaquin Valley Air Basin and account for emissions associated with construction activity.	Less than Significant	No mitigation is required.	Less than Significant
Expose Sensitive Receptors to Substantial Pollutant Concentrations	Both construction and operational emissions of PM_{10} and $PM_{2.5}$ are a small fraction of the significance thresholds. Because of the relatively small levels of Diesel Particulate Matter (DPM) emissions during Project construction and operation, DPM emissions from Project construction would disperse to negligible levels. The health impacts associated with exposure to DPM are not expected to be significant.	Less than Significant	No mitigation is required.	Less than Significant
Create Objectionable Odors	Construction could result in the emission of short-term odors from construction equipment and vehicles (e.g., diesel exhaust) that would be limited in extent at any given time and distributed throughout the Project vicinity during the duration of construction. The Project does not include any uses identified as being associated with long-term odor impacts. Incidents of Valley Fever are high in the Southern San Joaquin Valley and Central Coast regions. There are currently no recommended thresholds of significance for Valley Fever. The Project would comply with SJVAPCD Rule 8021 and Regulation VIII to control dust emissions generated during grading activities and implement best available control measures for all sources.	Less than Significant	No mitigation is required.	Less than Significant
3.4 Biological Resources				
Substantial Adverse Effect on any Candidate, Sensitive, or Special-Status Species	The Project Area consists of disturbed agricultural uses and provides poor habitat for special-status plants. No special-status plant species were observed during rare plant surveys conducted during the blooming period, and these species are not present within the Project Area. No impacts to special-status plants would occur. The Project would include ground disturbance and construction activities that would result in direct or indirect impacts to special-status wildlife species, if present. Special-status wildlife species that have been observed in the Project Area or that have a high or medium potential to occur include burrowing owl, Swainson's hawk, northern harrier, California horned lark, merlin, loggerhead shrike, San Joaquin kit fox, and nesting birds. Special-status wildlife species with a low potential to occur are unlikely to be present in the Project Area; no impacts to these species would occur, including Crotch bumble bee, blunt-nosed leopard lizard, Nelson's antelope squirrel, Tulare grasshopper mouse, and American badger. Direct impacts to burrowing owl and its habitat could occur from Project construction, including injury or mortality of individuals. Implementation of Mitigation Measures BIO-1 and BIO-7 would reduce the potential impacts to burrowing owls during construction to less than significant. Direct impacts to Swainson's hawk and its foraging habitat could occur from Project construction. Onsite construction noise and activities could disrupt a nest and cause nest abandonment. Implementation of Mitigation Measures BIO-4, BIO-5, and BIO-7 would reduce the potential impacts to less than significant. Northern harrier, California horned lark, and merlin were observed in the Project Area during surveys, and loggerhead shrike was observed within 2 miles of the Project Area. The Project Area provides foraging habitat for all four species, but only provides nesting habitat for California horned lark and loggerhead shrike. These are highly mobile species, and adult individuals are unlikely to be directly affected by Project activities. Direct mortality or injury, however, could occur to nestlings or nest destruction during construction, if present onsite. Indirect impacts may also occur to nesting individuals	Potentially Significant	**BIO-1** To protect burrowing owl, the following conditions shall be met prior to construction: ▪ A focused avoidance (pre-construction) survey for burrowing owl presence, including existing potential burrows/surrogates and any new potential burrows/surrogates that may have become available, shall be conducted according to California Department of Fish and Wildlife (CDFW) guidelines by a qualified biologist prior to initiating ground-disturbing activities. The survey shall be conducted no more than 14 days prior to the commencement of construction activities and shall occur within the Project Area and a 150-meter buffer area around the site, access permitting. The pre-construction survey would include visiting all potential burrows/surrogates during the timeframe of two hours before sunset to evening civil twilight or from morning civil twilight to 10:00 a.m., and would include protocol-level transects (i.e., 100 percent visual coverage) within the construction area and a 150-meter buffer around the area.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	from dust generation, noise/vibrations, and increased human activity. Implementation of Mitigation Measures BIO-5 and BIO-7 would reduce potential impacts to less than significant. San Joaquin kit fox is unlikely to den within the Project Area because soils are heavily disturbed by agricultural practices; however, this species may forage within the Project Area. Direct impacts to this species could include loss of habitat and potential dens due to construction activities. Indirect effects due to displacement of San Joaquin kit fox as a result of construction noise or increased human presence could also occur. Implementation of Mitigation Measures BIO-6 and BIO-7 would reduce potential impacts to less than significant. Potential impacts to nesting birds during construction could include direct mortality or injury to nestlings or nest destruction during vegetation clearing or grading. Indirect impacts could include increased noise and human activity onsite. Implementation of Mitigation Measures BIO-5 and BIO-7 would reduce the potential impacts to less than significant. It is possible for roosting bats to occur within the Biological Study Area (BSA). Bats could use the few trees as well as buildings and other artificial structures therein as roosting habitat. Foraging habitat includes agricultural land. Implementation of Mitigation Measure BIO-8 would reduce impacts to less than significant. Impacts to migratory birds may occur during operations and maintenance from collisions with Project facilities and equipment including power lines, fencing, and solar arrays. Implementation of Mitigation Measures BIO-5 and BIO-7 would reduce the potential impacts to less than significant. Any special-status species that have colonized the Project Area during operations and maintenance could be affected by decommissioning activities, which would be comparable to direct impacts described for construction. Special-status wildlife species with potential to inhabit the solar facility site during decommissioning include burrowing owl, San Joaquin kit fox, American badger, nesting birds, and roosting bats. Implementation of Mitigation Measures BIO-1 through BIO-8 would reduce the potential impacts to less than significant.		▪ The burrowing owl pre-construction survey can be conducted in conjunction with other required preconstruction surveys if timing is appropriate. ▪ If construction activity, as defined above, halts for a period of 7 days or more, the survey will be conducted again prior to the continuation of construction activities. ▪ A qualified biological monitor will be present during initial ground-disturbing Project activities. If burrowing owl are detected during biological monitoring, all ground disturbing activities shall halt immediately. ▪ If burrowing owl are detected within the Project Area or within the 150-meter buffer during the pre-construction survey or biological monitoring, buffers where no work would occur, as defined in the 2012 CDFW Staff Report, may be established to protect burrowing owl. Buffer size is dependent upon time of year and level of disturbance in the Project Area. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW. ▪ If occupied burrow avoidance is infeasible during the non-breeding season, a qualified biologist shall implement a passive relocation program in accordance with the 2012 CDFW Staff Report. A Burrowing Owl Exclusion and Mitigation Plan and Mitigation Land Management Plan shall be prepared in accordance with the 2012 CDFW Staff Report and reviewed and approved by CDFW prior to passive relocation activities. **BIO-2** Any construction materials stored in the Project Area that could serve as a burrow surrogate for burrowing owl, such as sedentary above ground pipes or rip rap, shall be covered when not in use as to not attract burrowing owl to the site. The construction staff shall check the construction materials regularly when not in use to ensure they are sufficiently covered. **BIO-3** The results of the pre-construction surveys and any additional site visits/checks will be documented in a report and submitted to Fresno County and CDFW. **BIO-4** If construction (i.e., equipment staging, vegetation removal, or ground disturbance) is scheduled to commence outside of the Swainson's hawk nesting season, no pre-construction surveys or additional measures are required for Swainson's hawk. During the breeding season (March 1 to September 15), a qualified biologist shall conduct pre-construction surveys of all potential nesting habitat within the Project Area. The survey shall focus on potential nest sites on and within a 0.5-mile buffer around the site in areas	

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			where access to neighboring properties is available or visible using a spotting scope or binoculars. Pre-construction surveys shall be conducted in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000) and occur no more than 10 days prior to construction activities. The surveying biologist must be qualified to determine the status and stage of nesting by Swainson's hawk without causing intrusive disturbance. If active Swainson's hawk nests are found, a 0.5-mile buffer shall be established by a qualified biologist around active nests and no construction within the buffer shall be allowed until the biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest), adult and juvenile Swainson's hawk have left the area, or the breeding season has ended. Encroachment into the buffer for Swainson's hawk must be authorized by the CDFW. If an active Swainson's hawk nest is detected, and a 0.5-mile no-disturbance buffer is not feasible, consultation with the CDFW is recommended to determine how to avoid take. If take cannot be avoided, consultation with CDFW is required to obtain an Incidental Take Permit prior to ground disturbing activities. **BIO-5** Avoid ground-disturbing and vegetation removal activities during the nesting bird season (February 1 to September 15). If these activities must occur during the nesting season, a pre-construction nesting bird survey will be conducted by a qualified biologist on and within 500 feet of the construction area, access permitting. The survey will be conducted no more than 10 days prior to initiation of these activities and repeated between delays of greater than 10 days during the nesting season. If active nests are found, it is recommended that a qualified biologist routinely monitor nests once construction begins to detect behavioral changes resulting from the Project. If behavioral changes occur, it is recommended that the work causing that change cease and CDFW be consulted for additional avoidance and minimization measures. If continuous monitoring is not feasible, a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors species will be flagged around the nest (this distance may be modified by the qualified biologist based on the bird species found). No ground-disturbing or vegetation removal activities will occur within the buffer until the nesting season has ended or the nest is vacated, and juveniles have fledged, as determined by the qualified biologist. Buffer sizes may be modified or encroachment into the buffer may occur at the	

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			discretion of a qualified biologist and with notification to CDFW in advance of implementation. **BIO-6** A qualified biologist will conduct a pre-construction den survey for San Joaquin kit fox no less than 14 days and no more than 30 days prior to any ground disturbance and/or construction activities in accordance with the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (U.S. Fish and Wildlife Service [USFWS] 2011). The survey will be conducted within and adjacent to the construction area. The survey will search for dens to ensure that San Joaquin kit fox is not present. If it is determined that the construction area is unsuitable for denning due to active agriculture or recent discing, then the survey is not required. If an active San Joaquin kit fox den is observed within the construction area, the CDFW and USFWS will be contacted prior to ground-disturbing activities within 200 feet of the den to determine the proper course of action. If San Joaquin kit fox activity is not detected, a memorandum will be submitted to CDFW and USFWS within 5 days after the completion of the pre-construction survey and prior to the start of ground disturbance and/or construction activities. In addition, appropriate USFWS construction and ongoing operational requirements from the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011) will be implemented. If San Joaquin kit fox is detected onsite, consultation with USFWS/CDFW is recommended to determine how to avoid take. If take cannot be avoided, consultation with USFWS/CDFW is required to obtain an Incidental Take Permit prior to ground disturbing activities. All perimeter fencing will be raised five to seven inches above ground level and knuckled under to allow San Joaquin kit fox movement through the Project Area. **BIO-7** All onsite construction workers will attend training for special-status species prior to working in the Project Area. The training will be conducted by a qualified biologist and will include life history information, mitigation measures, and known locations or habitats on the site for special-status species. At a minimum, the training will include the following species: burrowing owl, Swainson's hawk, American badger, San Joaquin kit fox, and other nesting raptors and birds. Educational materials shall also be available at the construction trailer in the form of species photos and/or handouts to serve as a reminder of the training for the workers. **BIO-8** If construction activities must occur during the bat breeding periods from March through August, a qualified biologist will	

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			conduct a pre-construction survey for roosting bats prior to any ground disturbance and/or construction activities. The survey will be conducted within and adjacent to the construction area. All active bat maternity roosts shall be avoided during breeding periods and an appropriate no-work buffer will be implemented based on the qualified biologist's best judgement regarding a necessary buffer for each observed bat species. If active bat maternity roosts are found, it is recommended that a qualified biologist routinely monitor maternity roosts once construction begins to detect behavioral changes resulting from the project. If behavioral changes occur, it is recommended that the work causing that change cease and CDFW be notified for additional avoidance and minimization measures. If an active special-status bat maternity roost location is proposed to be disturbed, the qualified biologist shall consult with the California Department of Fish and Wildlife and/or the United States Fish and Wildlife Service to identify any additional necessary minimalization measures to be implemented for Project activities.	
Substantial Adverse Effect on Riparian Habitat or Other Sensitive Natural Community	The vegetation communities and land covers within the Project Area are not riparian habitat or considered sensitive to local, state, or federal agencies.	No Impact	No mitigation is required.	No Impact
Substantial Adverse Effect on State or Federally Protected Wetlands	Four features (W5, W6, W7, and W8) met all three U.S. Army Corps of Engineers (USACE) wetland parameters (wetland hydrology, hydric soil, and hydrophytic vegetation) required to be considered a USACE Wetland. All features (W1 through W8) met the wetland hydrology parameter, and Features W1, W5, W6, W7, and W8 also met the hydric soil parameter. All eight of these are isolated features that are not jurisdictional to the USACE. In addition, these features are exempt from Regional Water Quality Control Board jurisdiction and are not Waters of the State. Areas of CDFW jurisdiction were found onsite, which includes all eight of the features.	Less than Significant	No mitigation is required.	Less than Significant
Substantial Interference with the Movement of any Native Resident or Migratory Fish or Wildlife Species or Established Native Resident or Migratory Wildlife Corridors or Impede Use of Native Wildlife Nursery Sites	The Project Area is not located within or near any Natural Landscape Blocks or Essential Connectivity Areas. The Project Area does not contain or function as a wildlife movement corridor because it is heavily disturbed by agriculture, which has removed native habitat and limits opportunities for habitat continuity and wildlife movement; it does not contain wildlife travel routes (e.g., riparian strip, ridgeline, drainage, waterway) or wildlife crossings (e.g., tunnel, culvert, underpass) that connect open space areas; it does not provide connectivity between large areas of open space on a local or regional scale; and it does not contain suitable cover or forage to attract or support wildlife species.	Less than Significant	No mitigation is required.	Less than Significant
Conflict with Local Policies or Ordinances Protection Biological Resources	The Project has been designed to be consistent with the Open Space and Conservation Element of the Fresno County General Plan. In addition, the Project would implement Mitigation Measures BIO-1 through BIO-8 to reduce potential impacts to biological resources, including special-status species.	No Impact	No mitigation is required.	No Impact
Conflict with an Adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or Other Local, Regional, or State HCP	The Project Area is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No Impact	No mitigation is required.	No Impact

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
3.5 Cultural Resources				
Substantial Adverse Change in Significance of a Historical Resource	The record search and cultural resources survey identified one previously recorded cultural resource (P-10-006640) within the northwestern portion of the Project Area, outside of the area of direct impact. The resource is not eligible for listing on the California Register of Historical Resources and does not qualify as a Historical Resource. No Historical Resources were identified within the Project Area. The Proposed Project includes subsurface excavation as deep as approximately 10 feet; the possibility remains that unknown subsurface cultural resources that qualify as Historical Resources could be encountered. Impacts to unknown cultural resources that could qualify as significant Historical Resources would be mitigated to less than significant through the implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3, which require cultural resources sensitivity training for construction workers, archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction.	Potentially Significant	**CUL-1** **Cultural Resource Worker Education/Training.** Prior to Project construction-related, ground-disturbing activities (e.g., vegetation removal, excavation, trenching, and grading), the Project Proponent shall conduct a cultural resources worker environmental awareness program for Project construction personnel. A Secretary of the Interior-qualified archaeologist shall be retained for the Project and shall prepare the initial cultural resource briefing of the worker environmental awareness program prior to ground-disturbing activities. During construction, the Project Proponent shall provide the training to all new construction personnel. The local Native American tribal representative(s) shall be invited to participate in the worker training, if requested. The cultural resource training shall include: ▪ an overview of applicable laws and penalties pertaining to disturbing cultural resources, ▪ a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area, ▪ types of cultural resources found in the area, ▪ instruction that Project workers shall halt construction if a cultural resource is inadvertently discovered during construction, and ▪ procedures to follow if an inadvertent discovery is encountered (Inadvertent Discovery Plan discussed below), including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs). **CUL-2** **Cultural Resource Monitoring.** Prior to ground disturbing construction activities, the Project owner shall retain a Secretary of the Interior qualified Project archaeologist to prepare and implement a Cultural Resource Monitoring Plan (Plan or Monitoring Plan) that shall outline the procedures for monitoring. The qualified Project archaeologist shall also coordinate and schedule Project archaeological and local Native American (as applicable) monitors during Project construction. The Plan will be submitted to the County for review and approval. The Plan will include (but not be limited to) the following: ▪ identification of qualified monitors, ▪ monitor responsibility and daily reporting, ▪ schedules, ▪ applicable laws,	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			▪ inadvertent discovery procedures (see CUL-3 below), ▪ monitoring frequency, and ▪ final reporting at the completion of the Project. The report will be submitted to the County and the Southern San Joaquin Valley Information Center. **CUL-3** **Inadvertent Discovery of Archaeological Resources During Construction.** A Secretary of the Interior qualified Project archaeologist shall prepare an Inadvertent Discovery Plan, as part of the Monitoring Plan for the Project. The local Native American tribal representative(s) shall be invited to participate in drafting any tribal cultural resources protocols for the Inadvertent Discovery Plan, if requested. The Inadvertent Discovery Plan shall provide protocols and notification procedures in the event of an inadvertent discovery. If subsurface archaeological resources are discovered during Project construction (e.g., ground-disturbing activities such as vegetation removal, excavation, trenching, and grading), all ground-disturbing activities within 50 feet of the find shall cease and the qualified Project archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the qualified Project archaeologist shall determine appropriate avoidance measures or other appropriate mitigation in consultation with the implementing agencies and any local consulting Native American groups expressing interest. Under CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified Project archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local consulting Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in CEQA Guidelines Section 21083.2, the site shall be treated in accordance with the provisions of CEQA Guidelines Section 21083.2 **CUL-4** If human remains are uncovered during Project construction, the Project contractor shall immediately halt work within 100 feet of the find, contact the Fresno County Coroner to evaluate the remains, and follow the procedures and protocols set forth in	

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			CEQA *Guidelines* Section 15064.5(e)(1). If the County Coroner determines that the remains are Native American, they shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a most likely descendant for the remains per Public Resources Code 5097.98. which states: the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendant regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et seq.) directing identification of the next-of-kin shall apply.	
Substantial Adverse Change in Significance of an Archaeological Resource	The record search and field survey did not identify any archaeological sites within the Project Area. The Proposed Project has a low potential to affect previously unknown, buried archaeological deposits; however, because the Proposed Project includes ground disturbance, the potential remains that archaeological resources could be unearthed. If unknown archaeological resources are discovered during Project construction, significant impacts could occur; however, with the implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3, potential impacts would be reduced to less than significant.	Potentially Significant	See CUL-1 through CUL-3 as described above.	Less than Significant
Disturb any Human Remains	There is no indication, either from the archival research results or the cultural resources survey, that any particular location within the Project Area has been used for human burial purposes in the recent or distant past; however, if human remains are inadvertently discovered during Project construction activities, the human remains could be damaged or disturbed, which would be a significant impact. Implementation of Mitigation Measure CUL-4 would reduce potential impacts to less than significant.	Potentially Significant	See CUL-4 as described above.	Less than Significant
3.6 Energy				
Result in Significant Environmental Impacts from Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources	Construction of the Proposed Project would use fuel-efficient trucks and equipment consistent with federal and state regulations, such as fuel efficiency regulations in accordance with CARB's Pavley Phase I and II standards, the anti-idling regulation in accordance with 13 California Code of Regulations (CCR) Section 2485, and fuel requirements in accordance with 17 CCR Section 93115, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. The Proposed Project would comply with State measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation and construction fuels. Operational energy consumption in the form of electricity use would occur as a result of operation of the facilities and substation, operation of the BESS, solar panel maintenance, and pumping of groundwater. However, the proposed solar panels would generate up to 171,500,000 kWh of electricity annually and offset onsite operational electricity use. This electricity generation would assist California investor-owned utilities in meeting their obligations under the State's Renewable Portfolio Standards (RPS) guidelines by providing a renewable energy alternative to the utilities' existing power mix. Transportation fuel use would be minimal and is predominately associated with worker commute trips, trucks, off-road equipment, and panel washing activities.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
Conflict with State or Local Plans for Renewable Energy or Energy Efficiency	The Project would comply with U.S. Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration fuel efficiency standards, CARB heavy-duty truck idling limits, CARB energy efficiency standards, the Climate Change Scoping Plan, and the State's RPS Program.	Less than Significant	No mitigation is required.	Less than Significant
3.7 Geology and Soils				
Substantial Adverse Effect, Including Risk of Loss, Injury, or Death involving: Rupture of Known Earthquake Fault Strong Seismic Ground Shaking Seismic-Related Ground Failure (liquefaction) Landslides	The Project Area does not intersect with an established Alquist-Priolo Earthquake Fault Zone but is within a seismically active area. Depending on the magnitude, distance to the source, and duration of shaking, damage to the Proposed Project facilities and injury to workers or visitors could result. However, because the Proposed Project would not establish a permanent onsite population during operations and maintenance, damage to onsite structures would not expose a substantial number of people to potential adverse effects due to strong seismic ground shaking. The potential for liquefaction or seismically induced settling in the Project Area is low based on the physical soil properties and groundwater depth. The Project Area has a nearly level topography and is not adjacent to any hills. No landslides have been mapped within or around the Project Area; therefore, the potential for landslide hazards to occur is very low. The Proposed Project would be subject to all appliable ordinances of the Fresno County Department of Public Works and Planning and would adhere to the California Building Code geotechnical and seismic design requirements. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Substantial Soil Erosion or Loss of Topsoil	Project construction would involve ground-disturbing activities that could expose soils to the effects of wind or water erosion. Construction activities would result in the disturbance of an area greater than 1 acre and would temporarily increase erosion, runoff, and sedimentation. The Project Proponent would be required to obtain and comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, and implement dust control measures, which would include construction Best Management Practices (BMPs) to control and limit sedimentation and erosion. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Located on Unstable Geologic Unit or Soil Potentially Resulting in Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse	No unstable soil or geologic unit has been identified within or near the Project Area, indicating a low likelihood that activities planned for the Proposed Project would lead to landslides, lateral spreading, subsidence, liquefaction, or soil collapse. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Located on Expansive Soil	None of the soils present within the Project Area have been identified as having a high capacity for swelling or shrinking; therefore, construction and operation of the Project are not expected to subject people and structures to the effects of expansive soils. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Soils Incapable of Adequately Supporting Use of Septic Tanks or Alternative Wastewater Disposal Systems	The Proposed Project would not include the use of septic tanks or an alternative wastewater disposal system; therefore, the soils onsite would not need to be adequate for supporting such systems. No impact would occur.	No Impact	No mitigation is required.	No Impact

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
Destroy a Unique Paleontological Resource, Site, or Geologic Feature	The geologic unit found at the surface of the Project Area is characterized as Holocene-age surficial sediments (Quaternary alluvium [Q]) and underlain by Pleistocene-age sediments (consolidated Pliocene and/or Pleistocene sedimentary rocks [QPc]) estimated at a depth of no less than 15 feet below the ground surface. The Holocene-age unit has low paleontological potential, whereas the Pleistocene-age unit has undetermined paleontological potential. Although unlikely, paleontological resources could be encountered if excavations within the Project Area exceed 15 feet below the ground surface. This could result in potentially significant impact if paleontological resources are encountered and inadvertently destroyed during ground-disturbing activities. The inadvertent discovery of a paleontological resource during construction cannot be entirely discounted; therefore, implementation of Mitigation Measures GEO-1 and GEO-2 would reduce impacts to less than significant.	Potentially Significant	**GEO-1** **Paleontological Worker Education and Awareness Program (WEAP).** Before starting construction activities, onsite personnel shall conduct Paleontological WEAP. The training shall include an overview of potential paleontological resources, basic recognition of paleontological resources, and appropriate procedures to notify management to engage a qualified paleontological specialist in the event that paleontological resources are discovered during construction activities (an unanticipated find). **GEO-2** **Inadvertent Discovery of Paleontological Resources.** If a paleontological resource is found, all ground-disturbing activities within 50 feet of the find shall immediately cease and a qualified paleontologist shall be notified. The qualified paleontologist shall evaluate the significance of the resources and recommend appropriate treatment measures. The qualified paleontologist shall prepare a report documenting evaluation and/or additional treatment of the resource. Any report documenting an unanticipated find shall be submitted to the County.	Less than Significant
3.8 Greenhouse Gas Emissions				
Generate Greenhouse Gas Emissions that may have a Significant Impact on the Environment	The total construction-related carbon dioxide equivalent (CO_2e) emissions annualized over a default project lifetime (30-years) methodologies is equivalent to approximately 75 metric tons of CO_2e ($MTCO_2e$). In addition, annual operational emissions would total 157 $MTCO_2e$, which would result in a total Project emission of 231 $MTCO_2e$ when considering both construction and operational emissions. This value is below the California Air Pollution Control Offices Association recommended threshold of 900 $MTCO_2e$. The Proposed Project would generate a maximum of 125 MW of electricity at any one time, which would serve to displace greenhouse gas (GHG) emissions and, thus, assisting in the attainment of the State's goal to reduce GHG emissions. Given that the Proposed Project would result in a net decrease of CO_2e emissions, impacts related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment would be considered less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Conflict with an Applicable Plan, Policy, or Regulation for Reducing Greenhouse Gas Emissions	The Proposed Project would comply with the strategies recommended by the State, the USEPA, and the Climate Change Scoping Plan. The Scoping Plan addresses Assembly Bill (AB) 1279, Senate Bill (SB) 905, SB 1065, SB 1075, and other legislation and executive orders addressing GHG reductions in various manufacturing sectors and managing natural lands. Because the main objectives of the Proposed Project are to assist California Investor-Owned utilities in meeting their obligations under the State's RPS Program and to assist California in meeting the GHG emissions reduction goal of 40 percent below 1990 levels by 2030, the Proposed Project would be compliant with the applicable recommended actions of the CARB Climate Change Scoping Plan as well as applicable federal, state, and local policies. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
3.9 Hazards and Hazardous Materials				
Create a Significant Hazard Through the Routine Transport, Use, or Disposal of Hazardous Materials	Waste generated during construction would be non-hazardous and consist primarily of cardboard, wood pallets, wire, scrap metal, common trash, and wood wire spools. During Project construction, diesel and gasoline fuels and other hazardous materials, such as oils, solvents, hydraulic fluids, and paints commonly associated with construction equipment, may be stored onsite. To limit the exposure of construction workers to hazardous materials, construction activities would comply with applicable worker protection laws and regulations, including the Occupational Safety and Health Act, Title 8 and 9 of the Code of Federal Regulations. Project O&M activities may involve the transportation, use, or temporary storage of a variety of hazardous materials, such as batteries, hydraulic fluid, diesel fuel, insulation oil for the transformers, grease, lubricants, paints, solvents, and adhesives. Adherence to the Hazardous Materials Business Plan (HMBP), as required by the California Hazardous Materials Release Response Plans and Inventory law (Health and Safety Code §25500 et seq.), would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to workers or the public. The Project Area would also be fenced to prevent public access to hazardous materials. During the Project decommissioning and site restoration process, equipment would be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment offsite. A State-licensed waste contractor would be used to ensure that all required laws and regulations have been met and to address any remaining requirements needed to successfully close the Project. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Create a Significant Hazard Through Reasonably Foreseeable Upset or Accident Conditions	Project O&M activities may involve the transportation, use, or temporary storage of a variety of hazardous materials, such as batteries, hydraulic fluid, diesel fuel, insulation oil for the transformers, grease, lubricants, paints, solvents, and adhesives. Removal and/or maintenance of vegetation within and around the Project Area may require herbicide. Appropriate spill containment and cleanup kits would be maintained during Project operation. Any hazardous materials that would be stored onsite would be contained in designated areas in accordance with a HMBP. Any chemicals will be applied or used according to manufacturer's specifications and in accordance with state and federal law and County guidelines. When not in use, chemicals will be stored in containment basins to prevent accidental leakage. The closure, decommissioning, and site-restoration process would require the transportation or use of hazardous materials similar to that of the construction phase. Adherence to regulations and applicant-proposed protocols during the storage, transportation, and usage of any hazardous materials would minimize and avoid the potential for significant upset and accident condition impacts. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School	The Project Area is not located within 0.25 mile of an existing or proposed school. The nearest schools are Huron Migrant Head Start and Huron Middle School. Each is approximately 3.25 miles north of the Project Area. No impact would occur.	No Impact	No mitigation is required.	No Impact
Create a Significant Hazard to the Public or Environment from being Located on a Site that is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5	According to a review of the GeoTracker and EnviroStor databases, no active Leaking Underground Storage Tank sites or Cleanup Program sites are located within 1 mile of the Project Area. Additionally, no Cleanup Program sites have been documented within the Project Area or in the vicinity; encountering aboveground and/or subsurface contamination is not anticipated during Project construction. The closest open case is a Cleanup Program site located approximately 2 miles north of the Project Area. Therefore, risk of upset and accident conditions would be unlikely, and the impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Result in a Safety Hazard for People Residing or Working in the Project Area if Located Within an Airport Land Use Plan or Within Two Miles of a Public Airport or Public Use Airport	The closest airport to the Project Area is the New Coalinga Municipal Airport, which is located approximately 9.3 miles west of the Project Area. According to the Fresno County Airport Land Use Compatibility Plan, the Project Area is not within any safety zone or noise contours associated with the New Coalinga Municipal Airport. Therefore, the Project would not interfere with airport operations or result in a safety hazard for people residing or working in the area. No impact would occur.	No Impact	No mitigation is required.	No Impact
Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan	The Project would not impair the implementation of or physically interfere with the Fresno County Multi-Jurisdictional Hazard Mitigation Plan coordinated by the Fresno County Office of Emergency Services. The Project Area is located in a sparsely populated rural area. The Project would not alter or impair any of the existing road networks and would require relatively low staffing for O&M activities. As a result, the Project would not impair the implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan. No impact would occur.	No Impact	No mitigation is required.	No Impact
Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires	The Project Area is not located within an area identified by the California Department of Forestry and Fire Protection as having substantial or very high risk. The Project Area is not located within a State Responsibility Area (SRA) or Federal Responsibility Area. The Project Area is within a Local Responsibility Area (LRA); however, the location does not overlap with a Fire Hazard Severity Zone (FHSZ) in an LRA. The Project would be designed in compliance with federal, state, and local worker safety and fire protection codes and regulations, which would minimize the potential for the occurrence of fire. Fire detection measures would be incorporated in the Project design in accordance with National Fire Protection Association safety standards, and all enclosures would be equipped with a fire suppression system. Although the closest people or structures are residences located adjacent to the Project Area, the Proposed Project is not expected to expose these residences, or any other people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
3.10 Hydrology and Water Quality				
Violate Water Quality Standards or Waste Discharge Requirements or Degrade Surface or Ground Water Quality	Construction activities would involve significant changes to onsite topography and could potentially loosen existing surface soils and sediments. The use of construction equipment onsite may involve the accidental release of fuel, oils, brake dust, lubricants, antifreeze, and other potentially hazardous substances at the Project construction site. The Project would be subject to compliance with the NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit would include the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would be implemented. The rip-rap cutoff trenches would be constructed perpendicular to natural drainage directions to control erosion during operations within major drainage corridors. The HMBP would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to prevent accidental release. Project decommissioning would result in similar potential impacts as those described for construction, including the potential for erosion, sedimentation, and the release of pollutants. Activities anticipated during decommissioning also would be required to comply with the same applicable federal, state, and local water quality regulations. Adherence to the SWPPP would be required. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Substantially Decrease Groundwater Supplies or Interfere with Groundwater Recharge	The Project would require a water supply during the 9-month construction and 12-month decommissioning phases, as well as a long-term water supply for the 35-year operational period. The Project's water demand will be met in full by groundwater from two wells pumping groundwater from the Westside Subbasin; each well is located on a separate parcel that is incorporated into the Project Area. The Project will supply its water needs from the two Project wells with an allocation cap of 1,174 acre-feet (AF) for the construction year 2025. This allocation cap is more than the expected construction water demand of approximately 156 AF for 2025. The Project will increase the amount of impervious surface; however, the majority of the Project Area will remain pervious. In addition, the runoff conditions currently found onsite will be maintained or improved, thereby retaining or improving current groundwater recharge conditions. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Substantially Alter Existing Drainage Pattern of the Site or Area, which would: Result in Substantial Erosion or Siltation Increase Rate or Amount of Surface Runoff Resulting in Flooding Create Runoff Water Exceeding Capacity of Stormwater Drainage Systems Impede or Redirect Flood Flows	The Proposed Project would include minimal excavation and grading during site preparation, which would alter existing drainage patterns onsite; however, the Project will be designed such that the control of runoff will be maintained or improved over the runoff conditions currently found onsite prior to construction. The Proposed Project would implement a SWPPP that would require preservation of existing topography to the maximum extent feasible, as well as include erosion and sediment control BMPs designed to prevent erosion and sedimentation or any other sources of polluted runoff from occurring during Project construction. The potential for erosion and sedimentation during Project operation caused by increased runoff from impervious surfaces will be very limited. The implemented stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would maintain or improve the existing runoff conditions in the Project Area. With compliance with the Project SWPPP, drainage plan, and applicable regulations, impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
In Flood Hazard, Tsunami, or Seiche Zones, Release of Pollutants due to Project Inundation	The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for Fresno County show that the majority of the Project Area does not lie within a 100-year flood zone or any other special flood hazard zone; it is located within Zone X, which is an area of minimal flood hazard risk. The remaining portion of the Project Area is located within Zone A, which has a 1 percent chance of flooding occurring in a given year but no base flood elevation determined. These areas will be avoided for placement of Project facilities. The Project Area is not located in the coastal zone or near a large body of water that could be susceptible to seiches, nor is it within a flood hazard zone identified by FEMA; therefore, there is no risk of inundation associated with such hazards. No significant impact regarding the release of pollutants due to Project inundation would occur.	Less than Significant	No mitigation is required.	Less than Significant
Conflict with or Obstruct Water Quality Control Plan or Sustainable Groundwater Management Plan	The Project would be regulated under the Basin Plan for the Tulare Lake Basin. Neither the nature of the Project nor the type of development proposed would be likely to conflict with this plan or obstruct implementation of any of its provisions. In addition, by adhering to the conditions stipulated by the SWPPP and the NPDES permits for the Project, water quality impacts would not result in violations to, conflicts with, or obstructions of the Basin Plan. No significant impact related to this water quality control plan would occur. The Westside Subbasin Groundwater Sustainability Plan (GSP) established a long-term plan for reducing the annual amount of groundwater withdrawn for the entire basin. The allocation cap (i.e., the amount of groundwater pumping allowed) will be reduced over a transition period that started in 2022 and will end in 2030. Because the Project has acquired three parcels of land that include the rights to two existing water-supply wells, it will be replacing an existing water user and not creating a new or additional demand on the groundwater resource in the Westside Subbasin. In addition, the proposed need for water for the Project will be within the allocation cap for the acquired parcels. As a result, the Project would not conflict with or obstruct the existing GSP.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
3.11 Land Use and Planning				
Physically Divide an Established Community	The Proposed Project would be developed on privately owned, undeveloped land that has been historically used for agriculture. The surrounding area is primarily used for agriculture. The nearest populated community is the community of Huron, which is located approximately 3 miles north of the Project Area. Given the distance of this community, the Proposed Project would not physically divide or restrict access to the community of Huron or any other community. No impact would occur.	No Impact	No mitigation is required.	No Impact
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	The Proposed Project has been designed in accordance with Fresno County regulations and to facilitate a possible return to agricultural uses after the lifespan of the Project. The Project parcels and all easement parcels are zoned AE in accordance with Fresno County's Zoning Classification. Fresno County permits utility-scale solar energy uses with a CUP within AE zoning districts. Per the County's Solar Facility Guidelines, the Proposed Project is designed with a buffer between the solar facility and adjacent agricultural fields. In compliance with the County's Solar Facility Guidelines, the Applicant will acknowledge the County's Right to Farm Ordinance and will record a Right to Farm Notice. Impacts to the County's General Plan, Zoning Ordinance, and Solar Facility Guidelines would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
3.12 Mineral Resources				
Loss of Availability of Known Mineral Resource of Value to the Region and State Residents	The Project Area and adjacent properties are not located on lands that are designated as Mineral Resource Zones by the State. In addition, no active mines or petroleum-extraction facilities are located within or immediately adjacent to the Project Area. No impact would occur.	No Impact	No mitigation is required.	No Impact
Loss of Availability of Locally Important Mineral Resource Recovery Site	The Project Area is not located on a locally important mineral resource recovery site delineated by the Fresno County General Plan. Although mineral resource recovery sites are located nearby, the operation of such sites would not be impeded by the development of the Proposed Project. No impact would occur.	No Impact	No mitigation is required.	No Impact

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
3.13 Noise				
Result in Generation of a Substantial Temporary or Permanent Increase in Ambient Noise Levels in Excess of Local General Plan Standards or Noise Ordinance, or Applicable Standards of Other Agencies	The highest sound level experienced during construction would be 81 A-weighted decibels (dBA) at Noise Sensitive Area (NSA) 1 (NSA-1) during phase 1 construction. This is 1 dBA higher than the 80 dBA Federal Transit Administration guidance level. In order to be in compliance with this guidance level, temporary moveable barriers will be used during construction to block the direct path from construction activities to NSA-1. All reasonable efforts would be made to minimize the impact of noise resulting from construction activities, including the implementation of Mitigation Measure NOI-1. The received sound level for full Project operations at the closest residential receptors would be 38 dBA. This operational noise level would comply with the Fresno County Noise Control Ordinance and the Noise Element and would not be higher than current ambient noise levels. As such, the noise impacts from Project operations would be less than significant.	Potentially Significant	**NOI-1** All reasonable efforts should be made to minimize the impact of noise resulting from construction activities, including the following measures: ▪ Maintain all construction tools and equipment in good operating order according to manufacturers' specifications; ▪ Limit construction activities to between 7:00 a.m. and 6:00 p.m., Monday through Friday; ▪ Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks; ▪ For construction devices that utilize internal combustion engines, ensure the engine's housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers' guidelines, if possible; ▪ Utilize a Complaint Resolution Procedure to address any noise complaints received from residents; and ▪ Use temporary moveable barriers to block the direct path of construction noise to NSA-1.	Less than Significant
Result in Generation of Excessive Groundborne Vibration or Groundborne Noise Levels	Construction vibration levels are predicted to be 0.00576 peak particle velocity inches per second (63 VdB) at the nearest sensitive receptor, which is approximately 275 feet from the Project Area. Vibration levels at the nearest NSA will be below the minimum vibration level for human perception of 65 VdB. Once construction is completed, the Project is not expected to have any significant operational vibration. The Project as a whole would have a less than significant impact to excessive ground-borne vibration or ground-borne noise levels.	Less than Significant	No mitigation is required.	Less than Significant
Expose People Residing or Working in the Proposed Area to Excessive Noise Levels if Located within the Vicinity of a Private Airstrip or an Airport Land Use Plan or within 2 Miles of a Public Airport	The Project is not located within 2 miles of a public airport or public-use airport, nor is it in the vicinity of a private airstrip or an airport land use plan. No impact would occur.	No Impact	No mitigation is required.	No Impact

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
3.14 Population and Housing				
Induce Substantial Unplanned Population Growth by Proposing New Homes or Extension of Roads or Other Infrastructure	The Project will not induce substantial permanent population growth in the region, either directly or indirectly. The peak onsite construction workforce is temporary and expected to include 200 individuals, who will be onsite at any given time. It is anticipated that most workers would commute to the site from nearby communities such as Huron, Coalinga, Lemoore, Visalia, and other locales within commuting distance to the Project Area. Decommissioning and site restoration are expected to require the same or smaller workforce. Once construction is completed, the number of staff onsite may range from zero (it is not necessary for staff to be present during plant operations) to 30 during periodic, routine maintenance events. Workers would be expected to commute to the Project Area from local and regional towns and cities, rather than relocate; therefore, construction, operation, and decommissioning of the Project would not require the construction of any new homes or other infrastructure. Additionally, even though the Project would increase the availability of electrical energy capacity, this factor alone is not expected to induce substantial population growth. The energy produced by the Project would not directly or indirectly encourage new development or induce population growth. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Displace Substantial Numbers of People or Housing	Construction, operation, and decommissioning of the Project would not result in the displacement of existing homes, necessitating the need to construct replacement housing elsewhere. Therefore, the Project would have no impact with regard to the displacement of existing housing.	No Impact	No mitigation is required.	No Impact
3.15 Public Services				
Substantial Adverse Physical Impacts from New or Altered Governmental Facilities to Maintain Performance Objectives for any of Public Services: Fire Protection Police Protection Schools Parks Other Public Facilities	The addition of construction personnel in the Project Area could result in a temporary increase in demand for fire protection services. Fire hazards from the Proposed Project as a large-scale construction project could increase the need for response from fire for emergency services as well as fire protection. All Project facilities would be designed and constructed in accordance with the 2022 California Fire Code and Fresno County Fire Code such that fire hazards are reduced and/or avoided. Compliance with these standards includes the preparation and implementation of a Project-specific Fire Safety Plan, which will contain notification procedures and emergency fire precautions for use during construction, operation, and decommissioning. Although Project construction would increase the number of people within the Project Area, the increase would be temporary and negligible and, thus, would not substantially increase the service demand for law enforcement protection services in Fresno County. The chain-link security fencing around the site perimeter and controlled access gates would minimize the need for sheriff surveillance and response during Project operation. The short-term increased employment of construction workers within the Project Area would not result in a notable increase in the residential population of the area surrounding the Project Area. Operation of the Proposed Project would not require full-time workers onsite. There would not be a corresponding demand or use of the local schools, parks, or public facilities.	Less than Significant	No mitigation is required.	Less than Significant
3.16 Recreation				
Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities such that Deterioration of the Facility would Occur	The Proposed Project is not located within or adjacent to a residential area, or within the immediate vicinity of any parks or recreational facilities. Additionally, no parks or existing recreational facilities are located onsite. The Project would not result in an increase of existing neighborhood or regional park or recreational facilities. No impact would occur.	No Impact	No mitigation is required.	No Impact

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Include Recreational Facilities or Require Construction or Expansion of Recreational Facilities that would Adversely Effect the Environment	The Proposed Project does not include recreational facilities. The Project would not result in an increase in population within the County; therefore, no new or expanded recreational facilities would be needed to meet the needs of the Proposed Project. The County meets Policy OS-H.2, and the Project would not increase the population within the County or result in the need for additional recreational facilities; therefore, no impact would occur.	No Impact	No mitigation is required.	No Impact
3.17 Transportation				
Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities	This Project will not conflict with any program, plan, ordinance, or policy regarding these modes of transportation. The Project is in a rural area that has no existing transit stops within 0.5 mile, and no bike lanes or pedestrian facilities are present. Because the Project does not include the construction or modification of existing roadways, it would have a less than significant impact.	Less than Significant	**TRANS-1** Construction Traffic Management Plan (CTMP). Prior to the issuance of a construction permit by the County, a CTMP shall be prepared by the Project Proponent and submitted to the County for review/approval. The CTMP would minimize potential Project-related traffic impacts. West Jayne Avenue and SR-269 are high-speed roadways that would serve as the primary access to the Project Area. If requested by Caltrans or Fresno County Public Works staff, temporary construction zone speed restrictions may be implemented along West Jayne Avenue and SR-269 to encourage motorists to slow down through the study area. The CTMP may include variable message boards and additional signage along West Jayne Avenue and SR-269 alerting motorists of the increased turning activity in the vicinity of the site driveways and access roads and to watch for slow-moving traffic. The CTMP shall also include Travel Demand Management measures to encourage non-single occupancy vehicle trips and minimize reliance on single-occupant vehicles and reduce single occupancy vehicle trips to and from the Project Area.	Less than Significant
Conflict or be Inconsistent with CEQA Guidelines Section 15064.3(b)	The total Vehicle Miles Traveled (VMT) during Project construction from passenger vehicles and heavy vehicles would be 2,187,301 miles. VMT for operations assumes four workers would visit the Project Area from the City of Fresno every other week, which would result in a maximum of 11,024 VMT per year during operations. Over the estimated 35-year Project lifespan, the total VMT for operations is likely less than 385,840 miles. Decommissioning will generate trips and vehicle miles traveled very similar to that of construction. No established threshold of significance for VMT exists for non-office, residential, or retail use projects in Fresno County; therefore, the significance of the additional VMT due to the Project was evaluated based on Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) goals, including Reduction of GHG Emissions and Diversity of Land Use. The Project is a solar and BESS facility, and the primary goal of constructing solar facilities is the reduction of dependence on GHG-emitting fossil-fuel energy sources. The Project would provide clean renewable energy for approximately 35 years after construction is completed. The Project would diversify land use by changing the current use from minimally developed cropland and an orchard to renewable energy production.	Less than Significant	No mitigation is required.	Less than Significant
Substantially Increase Hazards due to a Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)	No geometric design features will be constructed or modified as part of this Project. The roadways used by the Project have been deemed adequate for the conveyance of materials, equipment, and workers. No impact would occur.	No Impact	No mitigation is required.	No Impact

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
Result in Inadequate Emergency Access	The Proposed Project is located in a rural area with the primary access roads (West Jayne Avenue and SR-269) allowing adequate egress and ingress in the event of an emergency. Additionally, as part of the Proposed Project, existing interior access roads may be improved with the addition of an aggregate base or other native material with a soil stabilization material, which would be designed to meet applicable operations and maintenance and public safety access requirements.	Less than Significant	No mitigation is required.	Less than Significant
3.18 Tribal Cultural Resources				
Substantial Adverse Change in Significance of a Tribal Cultural Resource that is: Listed or Eligible for Listing in California Register of Historical Resources A Resource Determined to be Significant Under Public Resources Code 5024.1. Consider Significance of Resource to California Native American Tribes	The records search, pedestrian survey, and Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) did not indicate the presence of tribal cultural resources within the Project Area. In the event that buried significant tribal cultural resources are encountered during Project construction, significant impacts could occur. Given that no tribal cultural resources have been identified within or immediately adjacent to the Project Area, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource.	Potentially Significant	**TCR-1:** **Tribal Cultural Resource Worker Education/Training.** Prior to Project construction-related, ground-disturbing activities (e.g., vegetation removal, excavation, trenching, and grading), the Project Applicant shall retain a qualified representative from a local Native American tribe to conduct a tribal cultural resource worker education awareness program for Project construction personnel. During construction, the local Native American tribal representative(s) shall provide the training to all new construction personnel. The cultural resource training shall include: ▪ an overview of applicable laws and penalties pertaining to disturbing tribal cultural resources; ▪ a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area; ▪ types of tribal cultural resources found in the area, ▪ instruction that Project workers shall halt construction if a tribal cultural resource is inadvertently discovered during construction; and ▪ procedures to follow if an inadvertent discovery is encountered (Inadvertent Discovery Plan discussed below), including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs). **TCR-2:** **Tribal Cultural Resource Monitoring.** Prior to ground-disturbing construction activities, the Project Applicant shall retain a Secretary of the Interior-qualified Project archaeologist to prepare and implement a Cultural Resource Monitoring Plan (Plan or Monitoring Plan) that shall outline the procedures for monitoring. The qualified Project archaeologist shall also coordinate and schedule Project archaeological and local Native American (as applicable) monitors during Project construction. The Plan shall be submitted to the County for review and approval. The Plan shall include (but not be limited to) the following: ▪ identification of qualified monitors; ▪ monitor responsibility and daily reporting;	

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			▪ schedules; ▪ applicable laws; ▪ inadvertent discovery procedures (see TCR-3 below); ▪ monitoring frequency; and ▪ final reporting at the completion of the Project. The report shall be submitted to the County and the Southern SSJVIC. **TCR-3:** **Inadvertent Discovery of Archaeological or Tribal Cultural Resources During Construction.** A Secretary of the Interior-qualified Project archaeologist shall prepare an Inadvertent Discovery Plan as part of the Monitoring Plan for the Project. The local Native American tribal representative(s) shall be invited to participate in drafting any tribal cultural resources protocols for the Inadvertent Discovery Plan, if requested. The Inadvertent Discovery Plan shall provide protocols and notification procedures in the event of an inadvertent discovery. If subsurface archaeological or tribal cultural resources are discovered during Project construction (e.g., ground-disturbing activities such as vegetation removal, excavation, trenching, and grading), all ground-disturbing activities within 50 feet of the find shall cease and the qualified Project archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the qualified Project archaeologist shall determine appropriate avoidance measures or other appropriate mitigation in consultation with the implementing agencies and any local consulting Native American groups expressing interest. Under CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified Project archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local consulting Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, the site shall be treated in accordance with the provisions of Section 21083.2	

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
3.19 Utilities and Service Systems				
Result in Relocation or Construction of New or Expanded Water, Wastewater Treatment, or Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications Facilities	Water use is estimated to be approximately 120 AF per year (AFY), or about 200,000 gallons per workday over the construction period. The existing pond would need to be periodically replenished with approximately 2.92 AF (950,000 gallons) of water per month. The water supply for construction, including replenishing the pond, would come from the two existing onsite wells, which pump groundwater from the Westside Subbasin. The Project's operational water consumption is anticipated to be no more than 1 AFY and would be primarily used for panel washing. The Project would not require or result in the relocation or construction of new or expanded water facilities. The Project would not require connection to any septic systems or sewer infrastructure. Temporary sanitary facilities such as portable restrooms would be provided during construction and would not require a water supply. The Project would include minimal excavation and grading during site preparation, which would alter the existing drainage patterns onsite. The Project would be designed such that the control of runoff would be maintained or improved over the runoff conditions currently found within the Project Area prior to construction. The Project would comply with NPDES General Construction Permit requirements and would include a site-specific SWPPP to minimize the discharge of wastewater during construction as well as a Water Quality Management Plan, both of which would include BMPs for runoff control. During Project operations, the stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would maintain or improve the existing runoff conditions within the Project Area. Electricity is not anticipated to be consumed in large quantities during the construction phase because the equipment and vehicles used are typically powered with diesel or gasoline. Solar panels would generate as much as 171,500,000 kWh of electricity annually and offset onsite electricity use from operations and groundwater pumping. No natural gas pipelines are present within the Project Area, nor would any be used during any phase of the Project. Telecommunication equipment, such as telecommunication lines, would be required to be installed in the construction phase of the Project. The Project would require connection with the existing local telecommunication service. The telecommunication line would use both existing poles and new poles, as well as belowground installations. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Have Sufficient Water Supplies to Serve the Project during Normal, Dry, and Multiple Dry Years	The Project's water demand is estimated to be 120 AFY for the construction period, no more than 1 AFY for the operational life of the Project (approximately 35 years), and approximately 136 AFY for decommissioning of the Project. The onsite pond would also be replenished from the onsite wells, which would occur periodically (approximately 2.92 AF or 950,000 gallons, per month). The projected use of groundwater during construction would be well within the allocation cap and during operations. The projected annual water use of 36.5 AF would be far less than the allocation cap, even after the cap reaches its ultimate goal in 2030 (88 AFY). The lifecycle of the Project would eliminate the use of more than 23,700 AF of groundwater because the current agricultural uses of the Project would end when construction begins. Based on the estimated Project water demand for construction and operation, there would be a sufficient water supply to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Adequate Capacity of Wastewater Treatment Provider to Serve the Project's Projected Demand	The Project is not expected to generate a significant amount of wastewater because no offsite sewage or disposal connections to a municipal sewer system exist or are proposed for operations. Wastewater generated from the temporary portable sanitary facilities would be disposed of by a contractor at an approved offsite location. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures				
Issue	**Impact**	**Significance Before Mitigation**	**Mitigation Measure(s)**	**Significance After Mitigation**
Generate Solid Waste in Excess of State or Local Standards	The Project is not expected to generate a substantial amount of solid waste during construction. Common construction waste may include cardboard, scrap metal (including wire), masonry, plastic pipe, wood (pallets and wire spools), rocks, dirt, green waste, and common trash related to land development. Any hazardous waste generated from construction of the Project would be disposed of at a permitted and licensed treatment and/or disposal facility. The operation phase of the Project is expected to generate little to no solid waste. Nearby landfills have capacity for any waste generated during operations. Solar panels contain valuable materials that would likely be recycled at the end of their lifecycle. Decommissioning of the collection lines would not generate substantial amounts of solid waste. The Project would not generate solid waste more than state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Impacts related to landfill capacity would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Comply with Federal, State, and Local Management and Reduction Statutes and Regulations Related to Solid Waste	The Project would produce solid waste during construction, operation, and decommissioning. The Project would comply with AB 939, California Solid Waste Reuse and Recycling Access Act of 1991, AB 341, CALGreen requirements, and the County's Construction and Demolition Debris Recycling requirements. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
3.20 Wildfire				
Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan	The Project is not located in an area identified as having exposure to potential hazards or within an identified evacuation route. During construction, heavy construction-related vehicles could interfere with emergency response to the Project Area or emergency evacuation procedures in the event of an emergency. Access would be maintained throughout construction, and appropriate detours would be provided in the event of potential road closures. The Project would comply with the goals and objectives in the Hazard Mitigation Plan, including adequate ingress and egress routes, development setbacks, pest management plans, and weed management plans. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Exacerbate Wildfire Risks and Expose Project Occupants to Pollutant Concentrations from Wildfire or Uncontrolled Spread of Wildfire	The topography of the Project Area is flat. The Project Area is not located in an SRA or within a designated Very High FHSZ. The Project would not exacerbate potential fire conditions within or around the Project Area. Additionally, Project construction would comply with applicable fire codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant

Table ES-1. Project Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Require Installation or Maintenance of Associated Infrastructure that may Exacerbate Fire Risk or Impact the Environment	The Proposed Project includes a single 230 kilovolt interconnection gen-tie line to transfer energy from the new substation in Subarea A of the Project Area to the PG&E Gates Substation. Other related Project infrastructure includes internal roads, medium-voltage collection lines, a BESS, and an O&M building. The Project would include a BESS, which could burn or become damaged by fire and generate fumes and gases that are extremely corrosive. The design of the fire suppression system would be designed in accordance with federal, state, and local regulations. To further increase safety, the battery units are usually low voltage, encased in a steel enclosure and are set apart from combustible materials. The BESS would also have a fire rating in conformance with County standards and specialized fire suppression systems installed for the BESS. A thermal management system or Heating, ventilation, and air conditioning (HVAC) system is expected to be used to control temperature and humidity within the BESS. All road improvements would comply with development requirements for emergency access, and, therefore, would not exacerbate fire risk that could result in temporary or ongoing impacts to the environment. The installation of utilities, including the gen-tie, BESS, and internal/perimeter maintenance roads, would not be placed within a FHSZ, and any existing vegetation would be cleared. Therefore, the Project would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. The Project would also comply with the Fresno County Solar Facility Guidelines and would retain a 50-foot buffer between Project facilities (excluding fencing) and surrounding properties. This would provide a more than adequate buffer to stop the spread to surrounding areas if a fire were to occur. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant
Expose People or Structures to Significant Risks (Downslope Flooding or Landslides, Post-Fire Slope Instability, Drainage Changes)	The Project Area has very low (flat) topographic relief with no adjacent hills; therefore the risk of landslide hazards within or near the Project Area is low. The Project Area may be moderately susceptible to erosion from surface water sheet flow and rill runoff. However, the relatively flat nature of the Project Area helps alleviate erosion tendencies of the soil. The Project would be required to implement a SWPPP, including erosion and sediment control BMPs during construction; this would reduce the potential of erosion and siltation during construction and would control potential flooding events that could occur during construction. Additionally, the Project Area drainage would be designed to follow the natural drainage patterns, and none of the onsite facilities (e.g., fencing and panel posts) would prevent stormwater flow. Impacts would be less than significant.	Less than Significant	No mitigation is required.	Less than Significant

Notes: * This threshold is an additional criteria based on SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015a).

1.0 INTRODUCTION

1.1 Purpose and Use of the Environmental Impact Report

This Draft Environmental Impact Report (Draft EIR) has been prepared by Fresno County to evaluate the environmental effects of the proposed San Luis West Solar Project (*Project* or *Proposed Project*).

The California Environmental Quality Act (CEQA) was enacted by the California legislature in 1970. As noted under Section 15002 of the CEQA Guidelines, CEQA has four basic purposes:

1. Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.
2. Identify the ways in which environmental damage can be avoided or significantly reduced.
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
4. Disclose to the public the reasons why a governmental agency approved the project in the manner that the agency chose if significant environmental effects are involved.

An EIR is an informational document intended to: inform members of the public and agency decision-makers of the significant environmental effects of a proposed project, identify feasible ways to reduce the significant effects of a proposed project, and describe a reasonable range of feasible alternatives to a project that would reduce one or more significant effects and still meet a proposed project's objectives. In instances where significant impacts cannot be avoided or mitigated, a proposed project may nonetheless be carried out or approved if the approving agency finds that economic, legal, social, technological, or other benefits outweigh the unavoidable significant environmental effects (impacts).

1.2 Lead Agency

CEQA defines a *lead agency* as the public agency that has the principal responsibility of carrying out or approving a project that may have a significant effect upon the environment. The Lead Agency for the Proposed Project is Fresno County (County). The County has prepared this Draft EIR in accordance with CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.).

As the Lead Agency, the County has discretionary authority over the Proposed Project. The intent of this Draft EIR is to provide the information and analysis necessary for the County's key decision-makers, responsible agencies, and interested parties to understand the potential environmental effects of the Proposed Project. The County will rely on this Draft EIR, along with other information in the formal record, in deciding whether to approve, approve with modifications, or disapprove the application for the Unclassified Conditional Use Permit (CUP) requested for the Proposed Project (CUP No. 3781).

The Lead Agency's contact information is as follows:

Fresno County
Department of Public Works and Planning
2220 Tulare Street, 6th Floor
Fresno, CA 93721
Point of Contact: Alexander Pretzer, Planner
Telephone: (559) 600-4205

1.3 Responsible Agencies

CEQA defines a *responsible agency* as a public agency, other than the lead agency, that is responsible for carrying out or approving a project (PRC Section 21069). The County alone has discretionary authority to approve the Proposed Project. Other agencies that also have some authority or responsibility to issue discretionary permits for the Proposed Project are designated as Responsible Agencies. Potential Responsible Agencies for the Proposed Project may include the following:

- The California Department of Fish and Wildlife would be a Responsible Agency for any facility that entails construction within Waters of the State for which a Lake or Streambed Alteration Agreement is required pursuant to California Fish and Game Code Section 1602.
- Regional Water Quality Control Board – Central Valley Region would be a Responsible Agency for any facility that entails construction within Waters of the U.S. for which a Water Quality Certification is required pursuant to Section 401 of the Clear Water Act.
- The U.S. Army Corps of Engineers would be as Responsible Agency for any facility that entails construction within Waters of the U.S. pursuant to Section 404 of the Clear Water Act.
- The San Joaquin Valley Air Pollution Control District would be a Responsible Agency for any facility that may require a fugitive dust control plan, permit to construct, or permit to operate.

1.4 CEQA Overview

1.4.1 Environmental Review Process

During the preparation of an EIR, the CEQA review process consists of the following components, in chronological order:

1) Public circulation of the Notice of Preparation (NOP) and a 30-day public scoping period
2) Preparation of the Draft EIR
3) Public circulation of the Notice of Completion/Notice of Availability and Draft EIR for a 45-day public-review period
4) Preparation of the Final EIR and Response to Comments received on the Draft EIR
5) Decision-Making Body public hearing of the Final EIR materials

6) Filing of a Notice of Determination after the EIR is approved

1.4.1.1 Notice of Preparation

In accordance with the CEQA Guidelines (Section 15082), the County, as Lead Agency, prepared a NOP for the Draft EIR of the Proposed Project. The County distributed the NOP to the State Clearinghouse and interested parties for a 30-day comment period (November 21, 2024 to December 23, 2024).

During the scoping period and pursuant to the requirements of Section 15082(c)(1) of the State CEQA Guidelines, the County held a public scoping meeting on December 23, 2024 virtually via Microsoft Teams. Table 1-1 below summarizes the comments regarding the NOP. Seven comment letters were by mail and email. Appendix A includes copies of the comment cards and letters received.

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation

Commenter/Agency	Area of Controversy/Summary of Comment	Response
Comment Letters		
California Department of Transportation (Caltrans), District 6 (letter dated January 23, 2025)	Commenter states that no access shall be allowed off SR-269; access should be taken from W. Jayne Avenue. Commenter states that the ultimate concept for SR-269 between post mile 0.04 and 8.6 is a two-lane conventional highway with improvements. Therefore, an approximate of 15 feet shall remain clear from any buildings and/or permanent structures and that the project shall be constructed with sufficient setbacks to accommodate the future widening of SR 269. Commenter requests the anticipated number of construction-related trips, trip distribution, and hours of construction operations and assignment for the construction phase. Commenter states the need for a Caltrans encroachment permit and the need for the project to comply with the current Caltrans Highway Design Manual and State Standard Plans and Specifications.	The Applicant has incorporated access requirements and setbacks into the Project design. Information regarding construction trip information, distribution, hours and assignment are provided in Section 3.17 of this Draft EIR.
California Department of Fish and Wildlife (CDFW) (letter dated December 23, 2024)	Commenter recommends a qualified biologist perform relevant database and literature reviews and conduct surveys to determine potential presence of special-status species within the Project site.	An analysis of Project-related effects to biological resources is provided within the EIR in Section 3.4.

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation		
Commenter/Agency	**Area of Controversy/Summary of Comment**	**Response**
	Commenter recommends Swainson's Hawk (SWHA) surveys be conducted following SWHA TAC 2000 survey methodology. Commenter provides recommended SWHA mitigation measures, including surveys, avoidance buffers, take authorization, and foraging habitat mitigation. Commenter recommends a tricolored blackbird (TRBL) habitat assessment be conducted and consultation with CDFW if TRBL habitat is observed onsite. Commenter recommends conducting burrowing owl (BUOW) surveys in compliance with 2012 BUOW staff report (CDFG 2012). Commenter provides recommended BUOW mitigation measures, including surveys, avoidance buffers, and take authorization. Commenter recommends a general habitat assessment be conducted to evaluate the presence of loggerhead shrike (LOSH) and its habitat. If surveys indicate its presence or potential presence, commenter recommends consultation with CDFW for guidance on mitigation, avoidance, and impact minimization. Commenter encourages ground-disturbing activities to be scheduled outside of the nesting bird season (February 1st through September 15th). If nesting season cannot be avoided, commenter recommends a pre-construction survey be conducted within the project site and buffer no more than 10 days prior to the start of ground/vegetation disturbance and that a qualified biologist performs ongoing monitoring of any nests found, implementing nest disturbance buffers were applicable. Commenter recommends referring to surveys conducted by qualified biologists using proper survey methods, rather than relying on CNDDB to evaluate the presence or absence of a species.	

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation		
Commenter/Agency	**Area of Controversy/Summary of Comment**	**Response**
	Commenter recommends the evaluation of impacts to species resulting from artificial lighting from the project. Commenter recommends a cumulative impact analysis be conducted as part of the environmental analysis of the project. Commenter requests that any data collected during the environmental analysis be entered into CNDDB. Commenter states the need for filing fees to be paid as appropriate.	
Defenders of Wildlife (letter dated December 20, 2024)	Commenter recommends that biological resource surveys adhere to wildlife agency-approved protocols and that consultation with CDFW and USFWS occur if special-status species are observed. Commenter states need for take of blunt-nosed leopard lizard (BNLL) to be avoided to the extent possible and that if take cannot be avoided, consultation with CDFW should occur. Commenter requests surveys conform to CDFW-approved survey methodology for BNLL (2019). Commenter states need for BUOW protocol surveys to occur based on CDFW (2012) survey protocol and that the DEIR must provide mitigation measures that would avoid impacts to BUOW, or the project must obtain an ITP from CDFW. Commenter states need for Crotch's bumble bee (CBB) surveys to be conducted in accordance with CDFW (2023) protocol. Commenter states need for San Joaquin kit fox (SJKF) surveys to occur based on USFWS (2011) protocol and that impacts to SJKF connectivity should be examined in the DEIR. Commenter states need to conduct protocol-level surveys (CDFW 2010) for Swainson's Hawk (SWHA). Commenter recommends coordinating with wildlife agencies early in the project process.	An analysis of Project-related effects to biological resources is provided within the EIR in Section 3.4.

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation		
Commenter/Agency	**Area of Controversy/Summary of Comment**	**Response**
	Commenter recommends the DEIR includes consideration of lake effect impacts to migratory birds. Commenter requests that the DEIR analyze direct and indirect cumulative impacts of past, present, and reasonably forseeable activities in the region, including impacts from all types of development. Commenter also recommends coordination with CDFW for methods of analyzing cumulative impacts.	
California Department of Conservation (letter dated December 18, 2024)	Commenter advises discussion of several items in the Draft EIR, including the type, amount, and location of farmland conversion, impacts on current and future agricultural operations in the vicinity, cumulative impacts to agricultural land, implementation of any county agricultural mitigation plans, proposed mitigation measures for impacts agricultural lands, and the project's compatibility with Williamson Act or agricultural preserve lands. Commenter advises that the environmental review discuss compatibility of the project with Williamson Act requirements. Commenter advises that mitigation for the loss or conversion of agricultural land be addressed during environmental review.	An analysis of Project-related effects to agricultural resources is provided within the EIR in Section 3.2.
Fresno County Fire Protection District (email dated January 13, 2024)	Commenter states need for project compliance with CFR Title 24 - Fire Code and the submittal of construction plans to County Public Works and Planning and FCFPD for review. A minimum of 2 sets of plans must be delivered to FCFPD. Commenter states the requirement for a Mitigation Needs Assessment related to the project. Commenter states the need to email Assistant fire chief (andy.cosentino@fire.ca.gov) to schedule a meeting to discuss mitigation needs. Commenter notes a potential requirement for the project to be annexed into the	An analysis of Project-related effects to public services is provided within the EIR in Section 3.15. An analysis of Project-related effects to wildfire is provided within the EIR in Section 3.20.

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation		
Commenter/Agency	**Area of Controversy/Summary of Comment**	**Response**
	Community Facilities District No. 2010-01 of the Fresno County Fire Protection District, and/or a requirement to enter into a Fire Services Mitigation Protection Agreement with FCFPD.	
San Joaquin Valley Air Pollution Control District (letter dated January 22, 2024)	Commenter recommends a detailed preliminary review of the Project be conducted regarding the Project's construction and operational emissions and that CalEEMod be used to identify and quantify emissions. Commenter recommends the Project utilize the cleanest available off-road construction equipment. Commenter recommends the project evaluate risks to sensitive receptors and specifically perform a Health Risk Assessment (HRA) in accordance with SJVAPCD and CARB standards and thresholds. Commenter recommends an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant. Commenter refers the project to the SJVAPCD website for guidance. If the project is expected to have a significant impact, the District recommends the EIR include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA). Commenter recommends the project evaluate Heavy Heavy-Duty (HHD) truck routing patterns for the Project with the aim of limiting exposure of residential communities and sensitive receptors to emissions. Commenter recommends the EIR include measures to ensure compliance of the state anti-idling regulation (13 CCR § 2485 and 13 CCR § 2480) and discuss the importance of limiting the amount of idling, especially near sensitive receptors. Commenter notes that the project may be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and	An analysis of Project-related effects to air quality is provided within the EIR in Section 3.3.

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation		
Commenter/Agency	**Area of Controversy/Summary of Comment**	**Response**
	may require District permits. Commenter recommends that prior to construction, the Project proponent submit to the District an application for an Authority to Construct (ATC). Commenter notes that the project is subject to District Rule 9510 and therefore must submit an Air Impact Assessment (AIA) Application. Commenter notes the need for the project to comply with District Rule 4601 regarding Architectural Coatings. Commenter notes that the project may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in Regulation VIII, specifically Rule 8021 – Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities. Commenter notes that the Project may also be subject to the following District rules: Rule 4102 (Nuisance) and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).	
Santa Rosa Rancheria Tachi-Yokut Tribe (email dated January 13, 2025)	Commenter requests the archaeological survey report be shared with the tribe. Commenter requests a CHRIS search be completed and results shared with the tribe. Commenter requests a NAHC Sacred Lands File search be conducted and results shared with the tribe. Commenter requests to be retained to give a cultural presentation to all construction staff and crew prior to work beginning and provide ongoing training to any new staff and crew working onsite. Commenter requests to have tribal monitors onsite for all ground disturbing activities, including during decommissioning.	An analysis of Project-related effects to cultural resources is provided within the EIR in Section 3.5. An analysis of Project-related effects to tribal cultural resources is provided within the EIR in Section 3.18.

Table 1-1. Summary of Comments Received in Response to the Notice of Preparation		
Commenter/Agency	**Area of Controversy/Summary of Comment**	**Response**
	Commenter requests a fully executed curation agreement prior to any ground disturbance. Commenter requests a fully executed burial treatment plan prior to any ground disturbance.	

1.4.1.2 Draft EIR

The County is distributing this Draft EIR for comment to public agencies and interested groups, in addition to any others that have requested to be on the Project mailing list. The Draft EIR is also available for public review electronically on the County's website (https://www.fresnocountyca.gov/eir8542) and at the following physical location:

Fresno County
Department of Public Works and Planning
2220 Tulare Street, 6th Floor
Fresno, CA 93721

A period of 45 days has been established for public review of the Draft EIR for the Proposed Project, starting August 13, 2025 through September 29, 2025. Agencies, organizations, and individuals are invited to comment on the information presented in the Draft EIR during this period. Specifically, comments are requested on the scope and adequacy of the environmental analysis presented in this Draft EIR and not on the prior Initial Study. All comments on the Draft EIR should be sent to the following contact:

Alexander Pretzer, Planner
Fresno County
Department of Public Works and Planning
2220 Tulare Street, 6th Floor
Fresno, California 93721
Email: apretzer@fresnocountyca.gov

1.4.1.3 Final EIR

Following the 45-day public review period, the County will prepare responses to all comments and will compile these comments and responses into the Final EIR. The County's Decision-Making Body will consider the information in the Draft EIR and Final EIR during Project review and when deciding on the Proposed Project. The Final EIR will need to be certified as complete by the Decision-Making Body prior to making a decision as to whether or not to approve the Proposed Project.

1.5 Organization of the Draft EIR

The Draft EIR is organized as shown in Table 1-2:

Table 1-2. Draft EIR Organization

Chapter	Description
Executive Summary	This section provides a summary of the major conclusions of the Draft EIR, areas of controversy, the issues to be resolved, and how to comment on the Draft EIR. It includes the listing of the Responsible Agencies, Lead Agency contact information, a one-paragraph abstract of the EIR, and the date by which Draft EIR comments must be received.
Chapter 1. Introduction	This chapter provides general background on the Project; identifies the purpose and need for action, including the Project objectives; describes the roles of agencies that have discretionary approval and authorities regulating various aspects of the Project; and summarizes the public-involvement process for the Project.
Chapter 2. Project Description	This chapter provides a description of the Project location, Project objectives, and the elements of the Proposed Project.
Chapter 3. Environmental Impact Analysis	This chapter describes the regulatory setting, affected environment (existing conditions), and impact analysis approach for each environmental topic/issue area. Each section also contains a comprehensive analysis and assessment of impacts (direct, indirect, and cumulative) of the Proposed Project and other alternatives.
Chapter 4. Other Environmental Considerations	This chapter describes other aspects of compliance with CEQA procedures, including a description of unavoidable adverse impacts, the relationship between short-term use and long-term productivity, and any irreversible or irretrievable commitments of resources (40 Code of Federal Regulations 1502.16). This chapter also addresses CEQA requirements, which includes identifying significant impacts and mitigation measures to reduce or minimize significant impacts, describing growth-inducing impacts, and cumulative impacts.
Chapter 5. Alternatives	This chapter describes the alternatives development and screening process conducted for the Project. It also presents a range of reasonable Project alternatives that address the stated purpose and need for the Project, which includes the Proposed Project and No Project Alternative. This chapter also identifies and explains why some alternatives were considered but not analyzed in detail. It also compares alternatives and describes the preferred alternative and the Environmentally Superior Alternative pursuant to CEQA requirements.
Chapter 6. List of Preparers and Persons Consulted	This chapter provides a list of preparers, which includes the County and its consultants. This chapter also identifies the persons, groups, agencies, and other governmental bodies that were consulted or that contributed to the preparation of the EIR.
Chapter 7. References	This chapter provides the references used in preparing the EIR.
Appendices	This chapter contains information that supplements or supports the analyses in the EIR.

Notes: CEQA = California Environmental Quality Act; EIR = Environmental Impact Report

1.6 Anticipated Permits and Approvals

This Draft EIR may also be used by other public agencies to issue approvals and permits related to the Proposed Project. Table 1-3 provides a list of the anticipated agency approvals required to implement the

Proposed Project. The types of actions that these agencies, as well as other agencies not included on this list, may take in connection with this EIR include, but may not be limited to, the following:

- Approve, adopt, or amend applicable plans, policies, or programs
- Make findings of consistency
- Approve and issue permits
- Approve agreements
- Provide authorization and approval of funding
- Provide service

Table 1-3. Anticipated Agency Permits, Approvals, and Reviews

Agency	Permit, Approval, or Review
Fresno County	• Certification of the EIR (EIR 8542) • Unclassified Conditional Use Permit (CUP No. 3781) • Engineered Grading and Discharge Plan • Encroachment Permit • NPDES Construction General Permit • Building/Electrical Permit
California Department of Transportation	• Permit for Transportation of Oversized Loads • Encroachment Permit
California Public Utilities Commission	• Section 851 Permit or Notice of Construction
U.S. Army Corps of Engineers	• Clean Water Act Section 404 Permit (as needed)
California Department of Fish and Wildlife	• EIR Review • Migratory Bird Treaty Act compliance • California Endangered Species Act compliance
Regional Water Quality Control Board, Central Valley Region	• Stormwater Construction General Permit (including the development and implementation of a SWPPP)
San Joaquin Valley Air Pollution Control District	• Permit to Construct • Permit to Operate

Notes: CEQA = California Environmental Quality Act; NPDES = National Pollutant Discharge Elimination System; SWPPP = Stormwater Pollution Prevention Plan; UCUP = Unclassified Conditional Use Permit

1.7 Project Technical Studies

The analyses in this Draft EIR are supported by the following Project-specific technical studies (Table 1-4):

Table 1-4. List of Technical Studies Used in the Preparation of this Draft EIR

Technical Study Title	Date	Discussed in Draft EIR Section	Citation	Appendix
Agricultural Conversion Study, San Luis West Solar Project	July 2025	• Section 3.2 Agriculture and Forestry Resources	Tetra Tech 2025a	B
Reclamation Plan, San Luis West Solar Project	September 2024	• Section 3.9 Hazards and Hazardous Materials	Tetra Tech 2024a	C
Visual Impact Assessment, San Luis West Solar Project	July 2025	• Section 3.1 Aesthetics	Tetra Tech 2025b	D
Pest Management Plan, San Luis West Solar Project	August 2024	• Section 3.9 Hazards and Hazardous Materials	Tetra Tech 2024b	E
Air Quality and Greenhouse Gas Technical Report, San Luis West Solar Project	July 2025	• Section 3.3 Air Quality • Section 3.6 Energy • Section 3.8 Greenhouse Gas Emissions	Tetra Tech 2025c	F
Biological Resources Evaluation Revised Report, San Luis West Solar Project	July 2025	• Section 3.4 Biological Resources • Section 3.20 Wildfire	Tetra Tech 2025d	G
Burrowing Owl Survey Revised Report, San Luis West Solar Project	July 2025	• Section 3.4 Biological Resources	Tetra Tech 2025e	H
Revised Wetlands Delineation Report, San Luis West Solar Project	July 2025	• Section 3.4 Biological Resources	Tetra Tech 2025f	I
Negative Phase I Archaeological Survey Report, San Luis West Solar Project	July 2025	• Section 3.5 Cultural Resources • Section 3.18 Tribal Cultural Resources	Tetra Tech 2025g	J
Geology and Soils Report, San Luis West Solar Project	July 2025	• Section 3.7 Geology and Soils • Section 3.20 Wildfire	Tetra Tech 2025h	K
Water Supply Assessment, San Luis West Solar Project	July 2025	• Section 3.10 Hydrology and Water Quality • Section 3.19 Utilities and Service Systems	Tetra Tech 2025i	L
Sound Analysis Report, San Luis West Solar Project	July 2025	• Section 3.13 Noise	Tetra Tech 2025j	M
San Luis West Solar Project Traffic Impact Study	December 2024	• Section 3.17 Transportation	Tetra Tech 2024c	N

2.0 PROJECT DESCRIPTION

2.1 Overview

San Luis West Solar, LLC (Applicant) proposes to construct and operate the San Luis West Solar Project (Project or Proposed Project). The Proposed Project would consist of a 125-megawatt (MW) solar photovoltaic (PV) electric generation facility coupled with an estimated 30 MW Battery Energy Storage System (BESS). The PV portion of the Project would produce electricity by way of the PV effect, which uses a semi-conductor material to convert photons from the Sun into electrons, for injection into the electrical grid operated by Pacific Gas & Electric (PG&E). The BESS portion of the Project would store electricity either generated by the solar panels or from the PG&E grid. In either case, the BESS would make the stored energy available for discharge during periods of peak electrical load.

Key Project components consist of PV modules (solar panels), collection and interconnection line systems, BESS components, a new substation, a gen-tie line, access roads, and other minor components, including fencing and lighting. The Project would include approximately 770 acres of solar panels and associated infrastructure, including the new substation, BESS, Operations and Maintenance (O&M) building, and other associated equipment such as overhead and underground medium-voltage collection lines.

The Project would be located on seven parcels that total approximately 1,400 acres within the AE-20 and AE-40 (Exclusive Agriculture) zoning districts of unincorporated Fresno County (County). Project infrastructure would also include approximately 10 additional acres of transmission easements for underground and overhead medium-voltage collection lines situated along and within existing farm roads. The Project Site, which encompasses all areas of temporary and permanent impacts, is approximately 1,100 acres.

The County permits utility-scale solar energy projects with an Unclassified Conditional-Use Permit (CUP) within Exclusive Agriculture zoning districts.

2.2 Project Location and Setting

The Proposed Project is located within the Central Valley region of the County (Figure 2-1). The region consists of a broad, flat valley that is drained by the San Joaquin River and its tributaries and bound by the Sierra Nevada to the east and the Coast Range to the west. The elevations within the Project Site range from approximately 150 to 450 feet above sea level. Historically, the dominant habitat types comprised arid grasslands and shrub lands with expansive Valley Oak riparian woodlands and freshwater emergent wetlands in the proximity of water sources. Today, most of the land has been converted to agricultural uses.

The Project Site is located in the southern part of unincorporated Fresno County, approximately 40 miles south-southwest of the City of Fresno and 3 miles south of the City of Huron. It is within the U.S. Geological Survey Huron and Guijarral Hills 7.5-minute topographic quadrangles. The Project Site is located south of West Tractor Avenue, west of the California Aqueduct, and east of Interstate (I) 5; at its closest point, it is approximately 3 miles northwest of the Kings County boundary. Agricultural land and a

network of unnamed agricultural roads are located to the south (Figures 2-2 and 2-3). The Project Site extends to the south and approximately 3 miles east of PG&E's Gates Substation, which is located at the intersection of South Trinity Avenue and West Jayne Avenue. The center point of the Project Site is located at approximately 36° 08'18.3"N, 120° 05'46.8"W. The Project Site occupies portions of Sections 2 and 3 of Township 21 South, Range 17 East; a portion of Section 6 of Township 21, Range 18 East; a portion of Section 31 of Township 20 South, Range 18 East; as well as a portion of Section 35 of Township 21 South, Range 17 East (Mount Diablo Base and Meridian). The surrounding land uses consist primarily of agriculture. The Project Site includes seven parcels, which are identified by the following Assessor's Parcel Numbers:

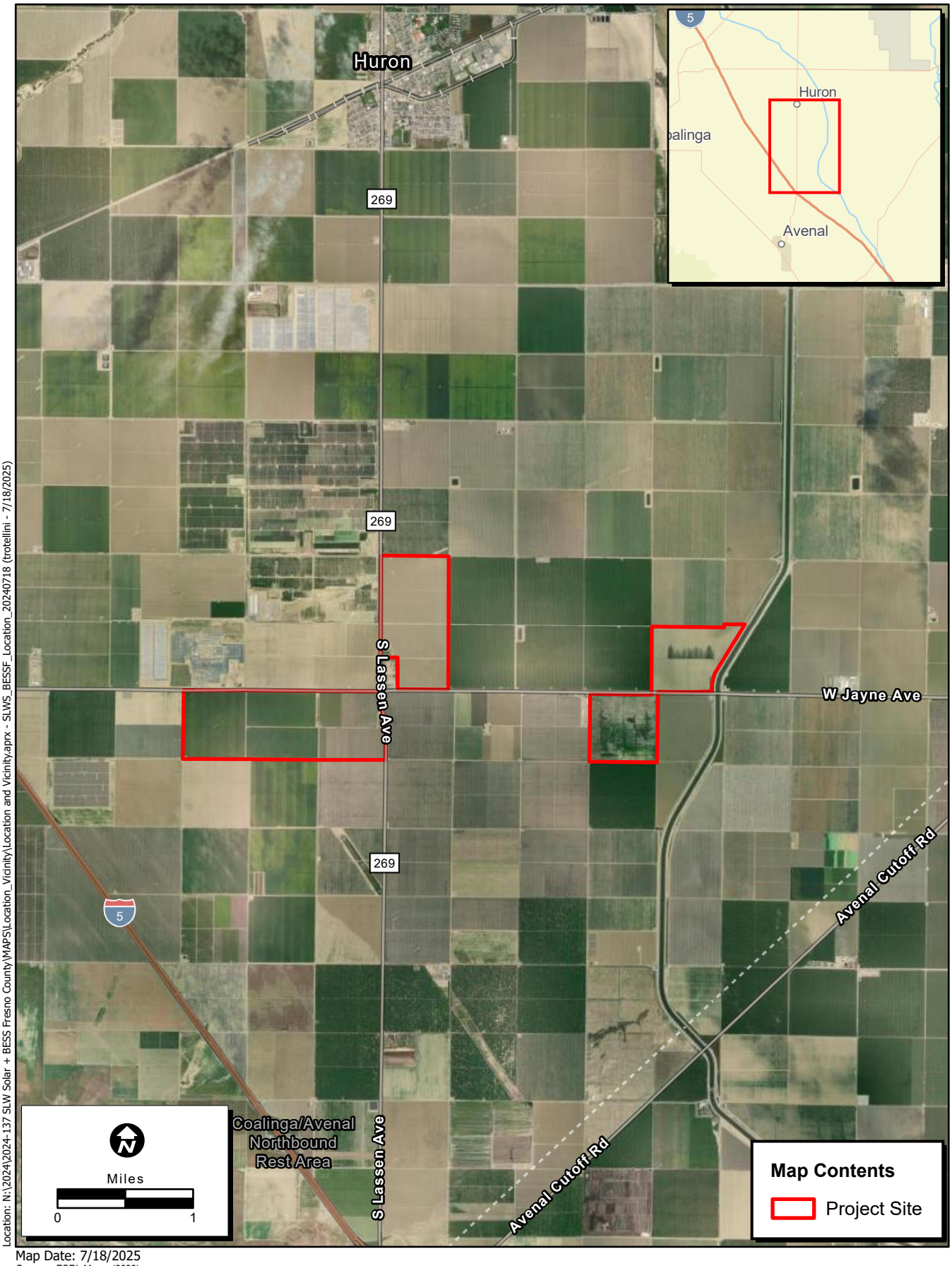
- 075-070-54S
- 078-080-55
- 085-050-47S
- 085-050-84S
- 078-060-85S
- 085-050-01S
- 085-050-48S

The Project Site comprises privately owned land that has historically been used for agriculture. The Project Site is designated as *Agriculture* in the County's General Plan (Fresno County 2024a). The California Department of Conservation's California Important Farmland Map lists most of the Project Site as Prime Farmland, with some smaller areas designated as Nonprime Agriculture Land (Figure 2-4). Most of the Project Site's parcels are currently subject to the Williamson Act. Furthermore, according to the Natural Resources Conservation Service's Web Soil Survey, the Project Site includes four types of soil, nearly all of which are considered Prime Farmland if irrigated. Table 2-1 lists the Project Site's soils and includes their farmland classification and percentages of the Project Site.

Table 2-1. Project Site Soils

Soil Unit No.	Soil Unit Name	Farmland Classification	Capability Class	Portion of Project Site (acres)	Portion of Project Site (percent)
425	Kimberlina sandy loam, 0 to 2 percent slopes	Not Prime Farmland	Irrigated: 7c Non-Irrigated: 1	151	14%
445	Excelsior sandy loam, 0 to 2 percent slopes	Prime Farmland if Irrigated	Irrigated: 7c Non-Irrigated: 1	30	3%
447	Excelsior sandy loam, sandy substratum, 0 to 2 percent slopes	Prime Farmland if Irrigated	Irrigated: 7s Non-Irrigated: 2s	146	13%
474	Westhaven loam, 0 to 2 percent slopes	Prime Farmland if Irrigated	Irrigated: 7c Non-Irrigated: 1	773	70%

Source: Tetra Tech Inc. 2025h



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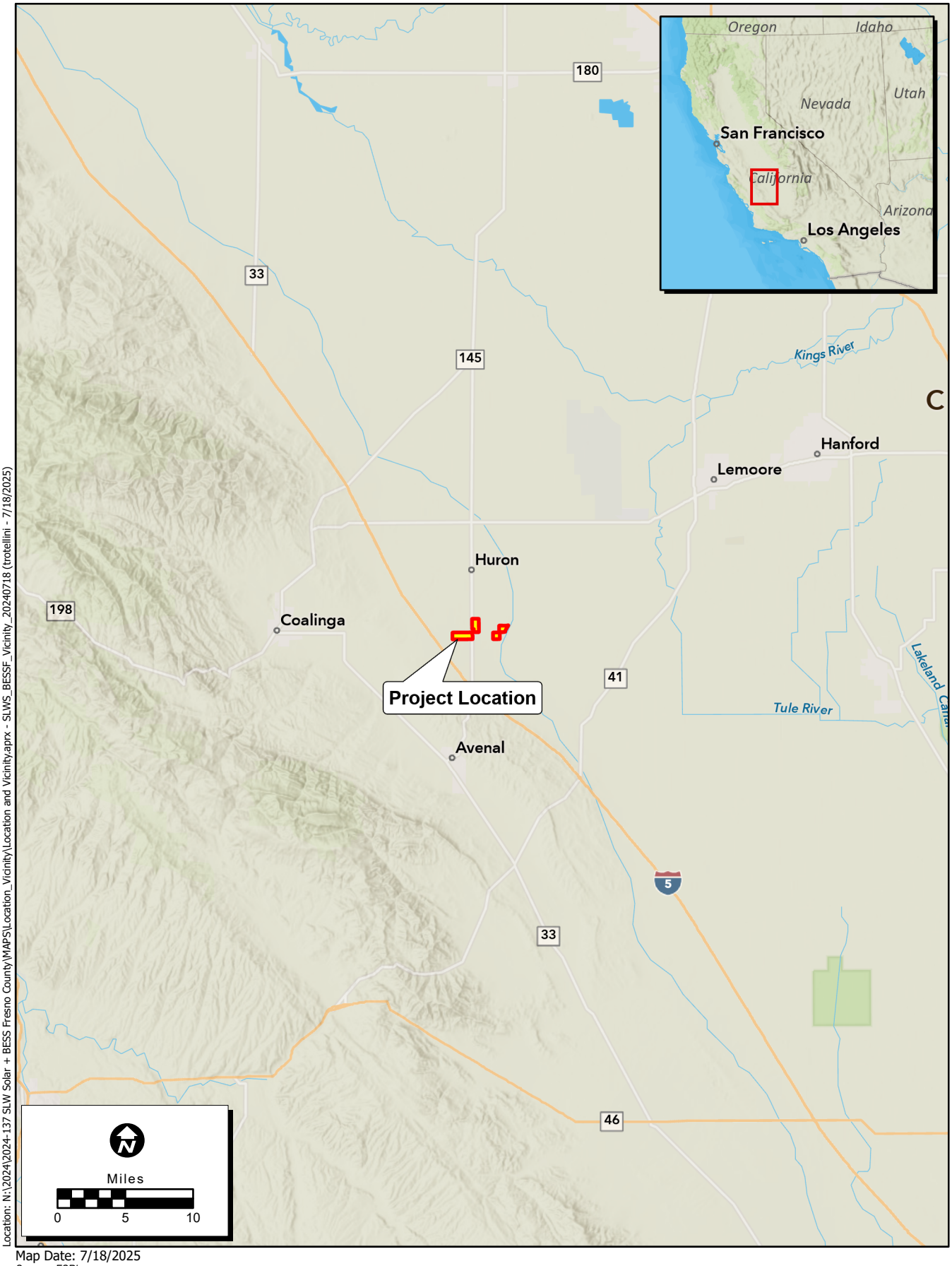
Map Date: 7/18/2025

Sources: ESRI, Maxar (2023)

Figure 2-1. Project Location

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2024-137 SLW Solar + BESS Fresno County



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Map Date: 7/18/2025

Sources: ESRI

Figure 2-2. Project Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2024-137 SLW Solar + BESS Fresno County

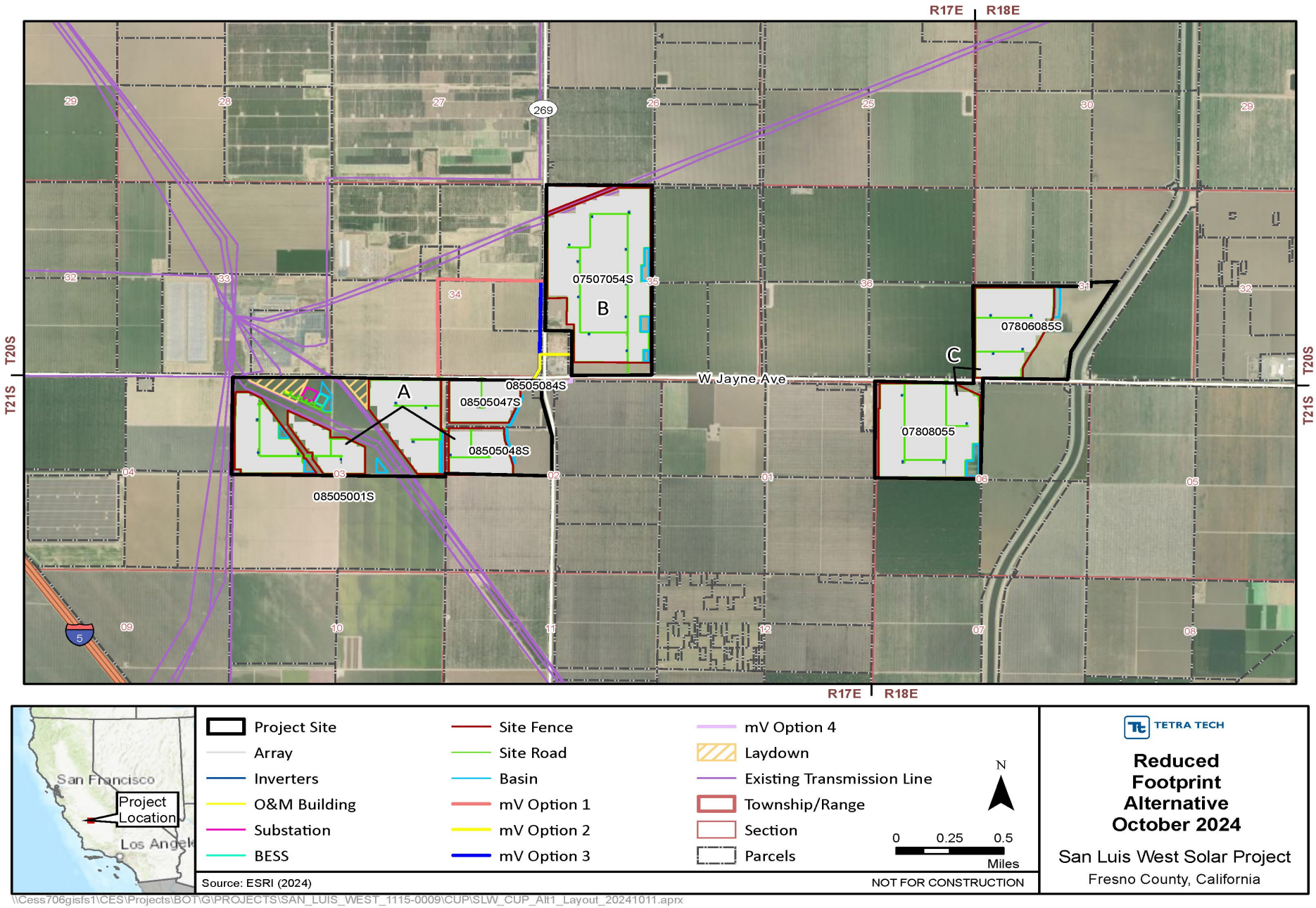
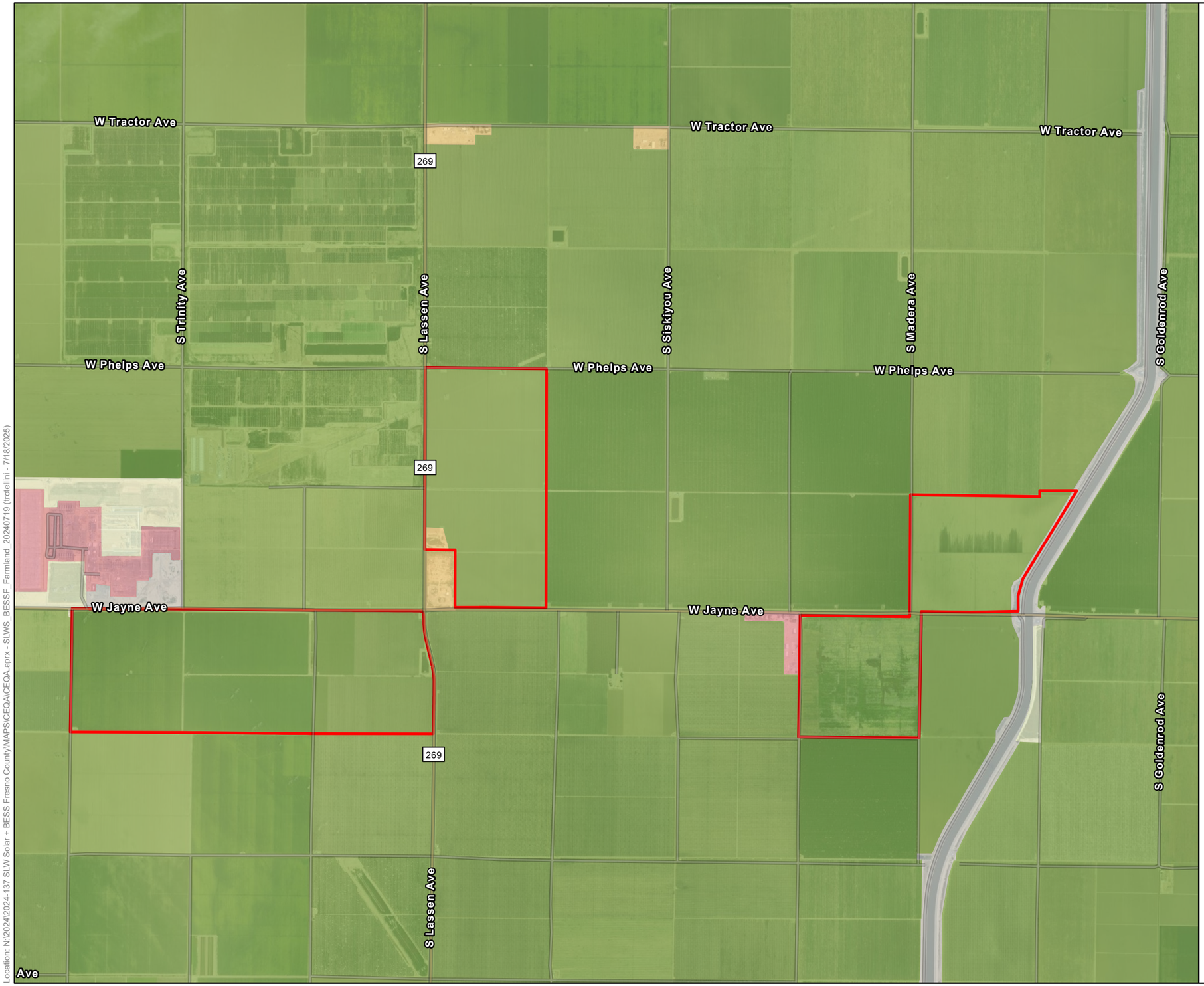


Figure 2-3. Site Plan

2024-137 SLW Solar + BESS Project

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS



Map Contents

- Project Site

Farmland Mapping & Monitoring Program Types

- Urban and Built-Up Land
- Farmland of Local Importance
- Prime Farmland
- Vacant or Disturbed Land
- Semi-Agricultural and Rural Commercial Land

Sources: ESRI, Maxar 92023), FMMP (2024)

Other Related Info if Needed



Location: N:\2024\2024-137 SLW Solar + BESS Fresno County\MAPS\CEQA\CEQA aprx - SLWS_BESSF_Farmland_20240719 (trotellini - 7/18/2025)

Map Date: 7/18/2025

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 2,000

Figure 2-4. California Important Farmland Finder

2024-137 SLW Solar + BESS Fresno County

2.3 Project Objectives

Project objectives are required to be provided in an Environmental Impact Report (EIR). The California Environmental Quality Act (CEQA) Guidelines Section 15124(b) states that a "clearly written statement of objective will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary." The guidelines further state that the statement of objectives should "include the underlying purpose of the Project and may discuss the Project benefits."

The Project contributes to objectives derived from Senate Bill 100, which codified the State's intent to decarbonize its electrical grid by mandating that 100 percent of the State's retail electricity sales be derived from zero-carbon and eligible renewable resources by 2045:

- The Project's primary objective is to generate and deliver low-cost, clean, renewable energy to the electrical grid operated by PG&E for regional consumption.
- In addition to low-cost renewable energy, the Project will help support California's resource adequacy needs.
- The Project will also help support economic and workforce development as the State seeks to recover from the devastating economic impacts of the shutdowns in the face of COVID-19.
- Contribute to the solution of reduced water supply reliability by (i) providing productive long-term but temporary repurposing of those lands from irrigated agriculture and for renewable energy production, and (ii) ensuring irrigated agriculture on the repurposed lands can be restored following the decommissioning of the renewable energy projects, particularly with advancement of water conservation and irrigation technologies.
- Facilitate implementation of the Sustainable Groundwater Management Act (SGMA) by: (i) contributing to the conjunctive use of groundwater for irrigation, (ii) promoting drought resiliency, (iii) reducing the likelihood of undesirable results like subsidence, including in the vicinity of sections of the San Luis Canal/California Aqueduct, and (iv) implementing the San Luis West Project in conjunction with other agricultural land repurposing management actions.
- Address the chronic shortage of Central Valley Project (CVP) contract water deliveries by promoting repurposing of farmland and by facilitating the redirection of scarce surface water allocations to other productive agricultural land within the District.

2.4 Existing and Future Land Use

The 5-mile area that surrounds the Project Site consists of a mixture of AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) and AE-40 (Exclusive Agriculture, 40-acre minimum parcel size) zoning designations (Figure 2-5; Table 2-2). Solar PV facilities are inherently compatible with agricultural uses of all types, as evidenced by the successful co-location of solar and agriculture in the County and throughout the U.S. Whereas residential or commercial uses may find certain agricultural uses (or their byproducts, such as dust and odor) to be a nuisance, solar does not. Dust from neighboring farms can impair the

efficiency of solar modules, but the potential for degradation in output due to such *soiling* has been accounted for in the Project's design. Periodic washings sufficient to mitigate the effects of soiling are included in the Project's *pro forma* financial model under O&M expenses. Furthermore, solar does not have any negative effects on adjoining agricultural uses.

Table 2-2. Land Uses of the Project Site and Vicinity

Area/Vicinity	Land Use Designation	Zoning Designation(s)	Existing Land Use
Project Site	Agriculture	AE-20, AE-40	Agriculture
North	Agriculture	AE-20	Agriculture
East	Agriculture	AE-20, AE-40	Agriculture
South	Agriculture	AE-20, AE-40	Agriculture
West	Agriculture	AE-20, AE-40	Agriculture

Notes: AE-20 = Exclusive Agriculture, 20-acre minimum parcel size;
AE-40 = Exclusive Agriculture, 40-acre minimum parcel size

Sources: Fresno County 2000, 2024e; Google Earth Pro 2024

The Project Site is bordered to the east by the California Aqueduct; to the north by a federally owned, undeveloped parcel; and to the west by lands owned by the same landowners who currently own the Project Site parcels and from whom the Applicant would purchase the parcels if the Project proceeds into construction. These owners, in deciding to sell the Project Site parcels for solar uses, have concluded that such uses would not negatively affect their agricultural operations.

2.4.1 General Plan Land Use and Zoning

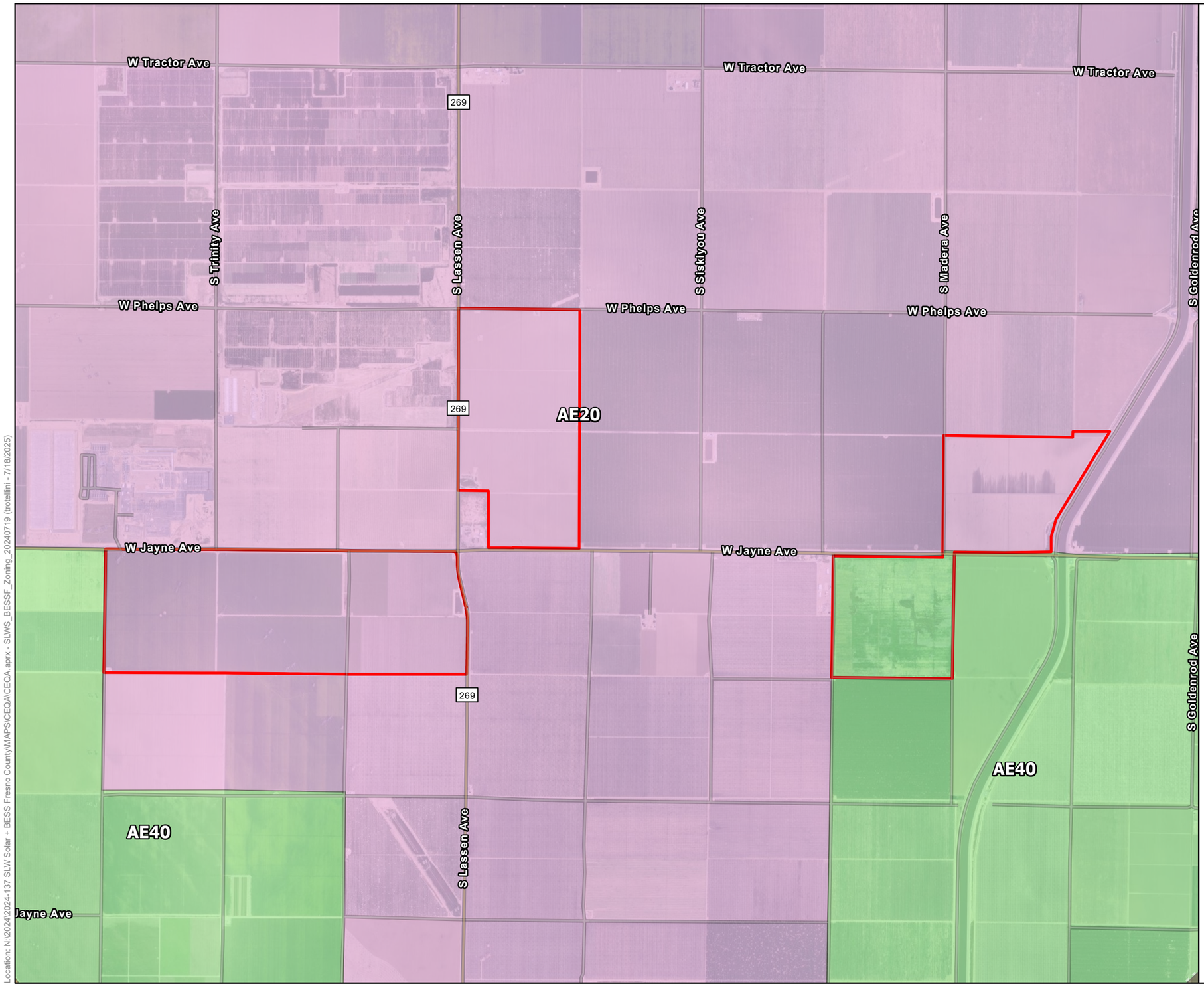
The Project parcels and all easement parcels are zoned Exclusive Agriculture (AE) in accordance with the County's zoning classifications (Figure 2-5). Solar is allowed as a conditional use within AE zoning designations; therefore, a zone change is not required in order to permit the Project. The Project Site is located within the County's Fire Protection District; therefore, the Project plans would be reviewed by the County Fire Protection District staff for consistency with applicable fire protection standards.

2.4.1.1 Agricultural Conversion Study

An Agricultural Conversion Study was prepared for the Proposed Project (Tetra Tech 2025a; Appendix B). The analysis conservatively assumes that the entire approximately 1,100-acre Project Site would be converted to non-agricultural use for a minimum of 35 years due to the construction and operation of the Project. At the end of the Project's useful life, the Project will be decommissioned and the Project Site will be restored per the Project's Reclamation Plan (Tetra Tech 2024a; Appendix C).

As part of the Agricultural Conversion Study, an Agricultural Land Evaluation and Site Assessment (LESA) was conducted to analyze the conversion of farmland to non-agricultural uses (Tetra Tech 2025a). The LESA considered the six factors of the LESA Model: two Land Evaluation factors composed of Land Capability Classification and Storie Index ratings; and four Site Assessment factors composed of the

Project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. The Project's scores of the two Land Evaluation factors and the four Site Assessment factors were weighted and totaled for a final LESA score of 92.2; scores from 80 to 100 points are considered significant. Additional information on the results of the LESA Model and impacts to agricultural resources is provided in Section 3.2.



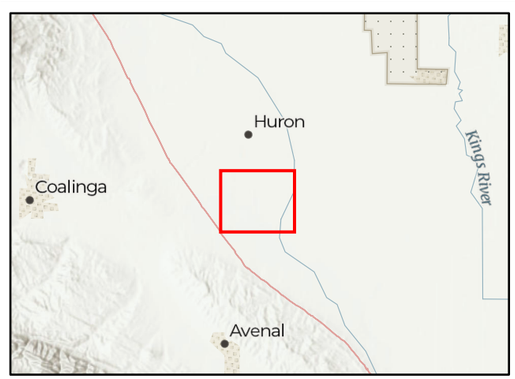
Map Contents

- Project Site

Zoning

- Exclusive Agricultural Zone - 20-acre Minimum
- Exclusive Agricultural Zone - 40-acre Minimum

Sources: ESRI, Maxar 92023), Fresno County (2024)
Other Related Info if Needed



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Map Date: 7/18/2025

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 2,000

Figure 2-5. County of Fresno Zoning

2024-137 SLW Solar + BESS Fresno County

2.4.2 County Solar Facility Guidelines

The County's Solar Facility Guidelines (as revised by the Board of Supervisors on May 21, 2013) set forth the County's policies for solar project development. The purpose of the guidelines is to help balance the development of solar projects with the need to "protect important farmlands and minimize impacts to existing agricultural operations."

The Project is designed with a buffer between the solar facility and adjacent agricultural fields. In compliance with the County's Solar Facility Guidelines, the Applicant would acknowledge the County's Right to Farm Ordinance and record a Right to Farm Notice. To facilitate a possible return to agricultural uses after the lifespan of the Project, a Reclamation Plan has been prepared to detail the removal of Project improvements and specific measures to return the Project Site to its pre-Project condition (Tetra Tech 2024a; Appendix C).

2.5 Detailed Project Description

The Project would include a solar-energy-generating facility, power inverters and transformers (Direct Current [DC] to Alternating Current [AC] electricity) or power-conditioning stations, an onsite substation, a BESS, and a connection to the PG&E-owned Gates Substation. The Project Site consists of three separate Subareas, which are herein referred to as Subareas A, B, and C (Figure 2-3):

- *Subarea A* would include approximately 280-acres of solar panels and associated infrastructure (i.e., internal roads, medium-voltage collection lines, a substation, a BESS, and an O&M building) located on four parcels that total approximately 800 acres. Of the 800 acres, approximately 650 acres are currently leased by the Project, and the remaining 150 acres are owned by the Project. Subarea A is located to the southeast of the existing PG&E Gates Substation, immediately south of West Jayne Avenue, and approximately 0.5 mile west of State Route (SR) 269. The proposed substation would also be located within Subarea A; it is anticipated that the BESS would be co-located with the substation in Subarea A. Two temporary laydown areas that total approximately 10 acres would be located within Subarea A, along West Jayne Avenue.
- *Subarea B* would include approximately 250 acres of solar panels and associated infrastructure (i.e., internal roads and medium-voltage collection lines) on one parcel, which consists of approximately 300 acres of leased land. Subarea B is bordered by SR-269 to the west, West Jayne Avenue to the south, and active row crops to the east.
- *Subarea C* would include approximately 240 acres of solar panels and associated infrastructure (i.e., internal roads and medium-voltage collection lines) on two parcels, which consist of approximately 325 acres of leased land. Subarea C is located to the immediate west of the California Aqueduct and is bisected by West Jayne Avenue.

Energy from the solar panels would be transmitted to the substation via a series of 34.5 kilovolt (kV) *collection lines*. The collection-line system would connect to the BESS and substation in Subarea A, then a 230 kV gen-tie line would connect from Subarea A to the Point of Interconnection (POI) at the PG&E

Gates Substation. Four collection-line options were considered in the Project's design, as depicted in Figure 2-3 and as outlined below:

- Option 1 begins in the middle of Subarea B and runs westward along an existing agricultural road for approximately 0.5 mile. The line then turns southward for approximately 0.5 mile along another existing agricultural road, then undergrounds at West Jayne Avenue to connect with Subarea A.
- Option 2 begins at the southwestern portion of Subarea B, approximately 0.25 mile north of West Jayne Avenue. The line runs directly westward for approximately 0.25 mile, turns toward the south-southwest, then undergrounds at West Jayne Avenue to connect with Subarea A.
- Option 3 begins in the middle of Subarea B (at the same point as Option 1). The line then runs directly southward along an existing agricultural road for approximately 0.75 mile, turns slightly westward, then undergrounds at West Jayne Avenue to connect with Subarea A. This option shares the same connection route across West Jayne Avenue as Option 2.
- Option 4 begins approximately 0.25 mile north of West Jayne Avenue in southwestern Subarea B (at the same point as Option 2). The line runs directly southward for approximately 0.25 mile, crosses West Jayne Avenue, then turns toward the west-southwest to connect to the northeastern corner of Subarea A.

Option 3 is the collection-line option incorporated into the Project's design and included as a component of the Proposed Project.

2.5.1 Project Components

2.5.1.1 PV Modules (Solar Panels)

The primary components of a solar PV generation facility include PV modules (solar panels); a metal racking system with east–west tracking capabilities; electrical inverters; electrical transformers; medium-voltage cabling; and fencing.

The solar panels would be grouped into arrays and mounted on metal racks affixed to the ground using either driven posts or helical screws. The racks would rotate the panels from east to west during the day. The DC output from the solar panels would be combined in parallel in combiner boxes and, from the combiner boxes, converted into AC via the inverters; the output of the inverters would be fed into transformers that *step-up* the voltage to match that of the grid. Excess energy that is not discharged into the grid, as well as energy absorbed directly from the grid, would then be converted back to DC by a separate inverter for storage in the BESS; the electricity can be converted back to AC when the BESS power is needed or when discharge into the grid in necessary.

The solar panels may be constructed of glass encasing either crystalline silicon, poly-crystalline silicon, or thin-film technology. The solar panels would be dark blue or black in color to minimize light reflection. Plastic binding material and metal frames would provide structural rigidity. The solar panels would be self-contained, durably constructed units designed to withstand exposure to the elements for a period of 35

years or greater. The solar panels deployed for use in the Project would be certified to comply with industry-standard quality testing. The solar panels would be electrically connected and grounded, and the plant would be designed in accordance with local and state codes and regulations. The final panel selection would be determined during the Project-engineering phase.

To support the trackers, the Project would use a single-axis tracking system designed to optimize power production of the modules by ensuring proper orientation to the sun both daily and seasonally. Metal piers driven into the ground by a pile-driving machine would support the single-axis tracking systems. Pier placement begins with a precise surveyed layout to ensure proper positioning of remaining tracker assembly parts. A pier cap and bearing assembly that supports and allows proper movement of the torque tube assembly would be affixed to the top of each pier. Single-axis tracking systems require a drive system that provides directional force to the torque tube. This can be accomplished with either a mechanical or hydraulic drive arm and tube assembly that *pushes and pulls* the torque arm through its range of motion or by a geared assembly that redirects rotational force to the tubes. Both approaches require either a small, geared motor or hydraulic system mounted on a pile support or pad strong enough to move the system through its daily/seasonal range of motions.

The trackers would be separated by distances of about 18 feet to accommodate maintenance personnel and design parameters that meet applicable County fire safety requirements. Modules would be approximately 8 feet tall and organized into rows separated by approximately 22 feet (from post to post) to form a uniform grid pattern. The solar panels and trackers allow for a natural light regime between and under the modules, supporting the co-management of solar energy generation, agriculture, and wildlife.

2.5.1.2 Collection Line System

The output of the Project's solar panels would be conveyed to the new Project substation via a series of underground 34.5 kV collection lines. These collection lines would be located in narrow trenches and buried approximately 3 feet below grade along a collection line corridor (Figure 2-3). Depending on site characteristics (e.g., soils, road constraints), there may be limited areas where collection lines would instead daylight to conductors that would be situated on a mono-pole (self-supporting vertical structure) system.

The collection-line system would connect to the BESS and substation in Subarea A; then, a 230 kV gen-tie line would connect from Subarea A to the POI at the PG&E Gates Substation. Collection line option 3 has been included in the Project, as depicted in Figure 2-3 and as detailed in Section 1.5, above

2.5.1.3 Battery Energy Storage System Components

The primary components of the BESS include lithium-ion batteries, which are typically housed in shipping containers that have integrated heating, cooling, ventilation, and safety systems. The BESS components would be co-located with the Project substation in Subarea A, across West Jayne Avenue from PG&E's Gates Substation.

The BESS would feature a secondary set of inverters that can charge and discharge the batteries independently of the solar panels, which allows for the batteries to be charged directly from the grid.

Excess energy that is not discharged into the grid, or energy absorbed directly from the grid, can be converted into DC for battery storage, and then converted back to AC to discharge into the grid.

The BESS is anticipated to be 10 feet in height and approximately 300 by 300 feet in area. Precise measurements would be determined during the Project engineering and building permit phases. The key components of the BESS are described in the following subsections.

Batteries

Although the batteries have not yet been selected for this Project, lithium ion (Li-ion) batteries are the most common batteries by installation, accounting for more than 90 percent of BESS installations. Li-ion batteries use the exchange of lithium ions between electrodes to charge and discharge the battery. They are typically characterized as power devices capable of short durations or stacked to form longer durations of power.

The Project would be considered a long-duration system. Li-ion BESSs are generally appropriate for serving energy applications, moderate power applications, and applications that require short response times (e.g., back-up power or supporting a black start). The three most common li-ion chemistries are Lithium Nickel Cobalt Manganese Oxide, Lithium Iron Phosphate, and Lithium Titanate Oxide. The battery component of the BESS has not yet been finalized, and the Applicant is also considering battery technologies.

BESS Fire Protection System

The exact system for the design of the fire suppression system has not yet been finalized. As such, this section outlines the general guidelines and industry best practices for outdoor li-ion installations, which would be adjusted based on the specific system selected in the final design. The following subsections summarize the categories of the expected fire/hazard protection expectations, which include: *Hazard Mitigation Analysis, System Certifications and Tests, Thermal Management and Controls, Monitoring and Alarms, Fire Protection,* and *Siting*. The goal of such expectations is first to provide barriers to potential issues, and second, to mitigate the impact in the event that a hazardous condition occurs. In general, the hazards posed by BESSs are mitigable given appropriate design considerations. In support of industry best practices, the expected protection measures would adhere to National Fire Protection Association (NFPA) 855 and International Fire Code 2018, or the current California Fire Code.

System Certifications and Tests. All li-ion BESSs would include subcomponents that meet, at a minimum, the standards of Underwriting Laboratories (UL) 1642, UL 1973, and UL 1741. They would also be subject to tests from a recognized laboratory to demonstrate resilience to electrical, mechanical, and environmental stressors; cascading protections against thermal runaway; and automatic shut off capabilities. Additionally, either of the following would meet industry best practices: certifying the BESS to UL 9540, or preparing a site-specific Hazard Mitigation Analysis paired with a Failure Mode and Effects Analysis.

Thermal Management and Controls

A thermal management system or Heating, Ventilation, and Air Conditioning (HVAC) system, whichever is more appropriate for the local environmental conditions, is expected be used. The system would maintain the temperatures within the demonstrated (per the testing data of battery) appropriate ranges of the battery cells.

The thermal management/HVAC system is intended to: 1) control temperatures at a battery module level, with circulation providing consistent temperature within each container and within the safe operating temperature ranges of the batteries; and 2) control humidity within the safe operating ranges of the batteries. The controls system is expected to include both the Building Management System (BMS) and higher-level controllers, including Balance of System (BoS) controllers and/or Programmable Logic Controllers. The BMS should be capable of balancing the state of charge between cells and modules, monitoring current and voltage between cells and modules, and shutting the system or sub-components down automatically in the case of abnormal conditions. The controller should be capable of receiving information from the BMS and should be proven to operate the batteries for only the applications and conditions that the batteries are capable of.

Monitoring and Alarms

The system is anticipated to have sensors to allow for the detection, at a minimum, of temperature, current, and voltage, at least at the battery module level. Battery cell monitoring is also expected to include voltage and as many temperature measurements as practical in the battery module. In addition, the system should have ambient temperature sensors, as applicable to larger containers, and smoke and thermal detectors for fire detection in compliance with NFPA 72. In all cases, this information would be monitored remotely and continuously to ensure that values remain within acceptable ranges, which are determined by the manufacturer and can be confirmed using the testing data described above. In the event of abnormal conditions, an alarm would be sent to the monitoring facility, and systems or sub-systems would automatically shut down. Additionally, the system status would be clearly visible on the outside of unit, indicating status via indicator light or screen (e.g., Off, Idle/Standby, Active/on, Faulted).

Fire Protection

Each BESS container would be constructed of non-combustible material, with consideration given for direction of gas or fire release away from first responders in the case of a catastrophic failure. The system manufacturer is expected to provide an emergency management plan, including Subject Matter Expert (SME) contact information and instructions to first responders. In case of an emergency, first responders should be in contact with the SME and ensure that the system is electrically disconnected prior to initiating an emergency response. First responders should not enter containers. Based on extensive destructive battery testing data, water should be the primary suppression agent used. Water would be available within standard distances, as approved by the County. The design of the fire-suppression system has not yet been finalized; however, it would be designed in accordance with federal, state, and local regulations.

Siting

The system shall be protected from access by non-approved personnel with either locked containers or fencing, as approved by the County, to ensure access in case of emergency. If multiple containers are used and each exceeds 250 kilowatt-hours, the containers would be placed at least 3 feet apart from other battery containers unless testing demonstrates otherwise. If multiple battery cabinets or racks are used within a single container, there are no requirements for internal spacing as long as the battery rack locations allow for acceptable thermal management. Emergency electrical disconnects are expected to be accessible in case of emergency, in compliance with all applicable safety regulations, and located on the outside of each container. If electrical disconnect is not within sight of the system, a sign would indicate its location.

2.5.1.4 Project Substation

Energy generated by the Project and transmitted along the collection line system would be sent to the Project's onsite, dedicated substation located in Subarea A (Figure 2-3). Energy that is collected and aggregated at the substation would be *stepped up* in voltage to 230 kV before being transmitted along a high-voltage gen-tie line to the POI. The typical components of the onsite Project substation include: incoming 34.5 kV feeder breakers, a main step-up transformer (from 34.5 kV to 230 kV), a control enclosure, dead-end and shield poles, support steel, an auxiliary station service transformer, circuit breakers, and a motor-operated disconnect switch.

The overall footprint of the Project substation is anticipated to be approximately 350 by 300 feet; associated structures such as lightning protection poles and cables would reach approximately 80 feet in height. An emergency generator may be installed for use in the event that the regional transmission system fails. If deemed necessary, the generator would likely be installed at the substation. This emergency generator would provide emergency power until the regional transmission system restores operations. The generator would be powered by propane or diesel and is estimated to be 49 kilowatt or less in size. An approximately 220-gallon fuel tank would be located immediately adjacent to the generator. If installed, the generator system would comply with applicable air quality and spill prevention/control requirements.

2.5.1.5 Gen-Tie Line

The Project would feature a single, approximately 230 kV gen-tie line running between the substation in Subarea A and the PG&E Gates Substation (Figure 2-3). The route would feature steel or wooden transmission towers, wires, guys, conductors, and other components.

2.5.1.6 Interconnection

The POI is the physical point at which power from the Project is delivered into the PG&E grid. In this case, the POI is a 230 kV bus at PG&E's Gates Substation. The Project is currently in the interconnection study process and is being studied for the full 125 MW nameplate capacity of the Project. An interconnection agreement for the Project—a contractual agreement between the Project, California Independent System Operator, and PG&E that governs the upgrades required in order to interconnect the Project and associated cost responsibilities and timelines—was executed in December 2021. Interconnection upgrades

are anticipated to be completed by the end of 2025. The typical components of a POI switching station include: a circuit breaker, metering, communication, protection, and control devices; circuit switcher; protection and control panel; Supervisory Control and Data Acquisition (SCADA) and metering equipment; and battery inverters.

2.5.1.7 Access Roads

Access to the Project Site from public roads would be via main entrances along West Jayne Avenue and SR-269. The Applicant plans to use existing interior access roads; however, these roads may be improved with the addition of an aggregate base or other native material with a soil stabilizer, if necessary. Interior and perimeter access routes would be designed to meet applicable O&M and public safety access requirements. No public road improvements are currently proposed as a part of the Project; however, driveways that connect the public roads to the interior road system may be installed, or improvements may be made for existing public road access points.

2.5.1.8 Fencing

A perimeter fence would be installed along the edge of all Project parcels with an approximately 50-foot setback from property lines. Fencing would conform to County requirements but typically consist of either a 6-foot-tall chain link fence with barbed wire or an 8-foot-tall, ranch-style fence with no barbed wire. Landscaping is not be included, unless required. Access gates would be provided at each site entrance.

2.5.1.9 Parking

Parking is not currently proposed as part of the Project. Although the Project Site would have ample space to provide access for employees and service/delivery vehicles, formal parking spaces would not be included unless required by local or state regulations. No goods are proposed to be sold onsite, and no public access would be permitted.

2.5.1.10 Security Lighting

Security lighting may be installed to allow for ongoing maintenance and security, including at site entrances and at other strategic locations around the Project Site. Manually controlled lights would be installed at equipment pads and at the substation. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. If installed, all lighting would conform to applicable County outdoor lighting codes.

2.5.1.11 Stormwater Facilities

The Project would comply with applicable stormwater regulations and requirements. The site drainage, however, is designed to follow the natural drainage pattern, and none of the onsite facilities, including fences and panel posts, should prevent stormwater flow. Therefore, the Applicant anticipates that the Project would have very limited effect on Project Site drainage. No onsite detention facilities are proposed.

2.5.1.12 Signage

Project signage is proposed for informational, safety, and security purposes. Signage would be installed on the fence or in the ground in the vicinity of the main entry gates. Signage would identify the Project operator and owner, in addition to providing emergency contact information. Small-scale signage would also be posted at the main entry gates and intermittently along the perimeter fencing on all exterior parcel boundaries, to indicate "No Trespassing" and "Private Property". All signage would conform to County signage requirements.

2.5.1.13 Telecommunications

The Project would require connection with the existing local telecommunication service. A telecommunication line typically comprises a fiber optic cable and/or a 25-pair telephone line, which would be installed aboveground and underground, either attached to existing distribution lines or installed immediately adjacent to the Project substation. The telecommunication routes would use a combination of existing poles or new poles and underground installations. Lines would be placed within utility franchise easements to the extent feasible. The POI to the existing telecom facilities would be in a small telephone/fiber-optic vault. Interconnection to the Project would be within the Project substation. Underground installations are usually installed 24 to 48 inches below grade. Aboveground lines would be placed in accordance with applicable code requirements and are typically placed 6 feet below existing distribution lines or on new, adjacent wooden poles. Telecommunications may also be transmitted by a small wireless antenna, which would be placed at the Project substation.

2.5.1.14 Meteorological Data Collection System

The Project may require meteorological data collection system(s). The system(s) would include a variety of instruments to collect meteorological data mounted at various locations throughout the Project Site. The meteorological data would be collected at the level of the solar panels or approximately 10 feet above the ground.

2.5.1.15 Other Infrastructure

O&M activities would take place in a new O&M building located in the northeastern corner of Subarea A. This building would measure approximately 100 by 20 feet in area and approximately 15 feet in height. The Project would follow applicable County requirements for sanitary service and septic systems; however, at this time, the Project does not anticipate installing a sanitary water or septic system. It is anticipated that the O&M facility would use portable toilets and bottled water for potable water purposes. Water requirements during operations would be negligible (for occasional cleaning of solar panels) and are anticipated to be less than 1 acre-foot per year.

2.5.2 Site Access

It is anticipated that primary access to the Project Site would originate via I-5 (Exit 325) to West Jayne Avenue—a paved County road that features one lane of traffic in each direction (east to west). From there,

traffic would travel eastbound along West Jayne Avenue to the Proposed Project Site. Access may also be provided from SR-269, which runs north–south near the center of the Project Site. A network of existing agricultural roads within the Project Site would be used for ingress and egress during construction. No road improvements are currently proposed as a part of the Project, unless required by the County. I-5 is the only major transportation route near the Project Site. I-5 runs from north to south, connecting Southern California to Northern California and the Pacific Northwest. Other highways in the vicinity of the Project Site include SR-269, which runs north–south and connects the City of Avenal to the north to the community of Huron; and West Jayne Road, which spans the central valley from east to west. Most roadways in the immediate Project vicinity consist of unpaved agricultural roads.

2.6 Construction

2.6.1 Construction Access Routes and Laydown Areas

Construction vehicles would access the Project Site from either West Jayne Avenue or SR-269. During construction, materials would be placed within the Project Site; specifically, within two separate laydown and staging areas in Subarea A. These areas are outlined in the Site Plan and total approximately 10 acres. To prevent theft and vandalism, materials would be secured within fenced areas at all times. Small storage containers may be used to store tools and other construction equipment. In addition, security guards would regularly monitor the Project Site. Portable toilet facilities would be installed for use by construction workers. Waste disposal would occur in a permitted offsite facility. Domestic water for use by employees would be provided by the construction contractor through deliveries to the site.

2.6.2 Construction Timing, Activities and Equipment

The desired Commercial Operation Date for the Proposed Project is December 31, 2026, with construction anticipated to commence in early 2026. The Applicant anticipates that construction would occur during a period of approximately 9 months and is anticipated to occur early 2026. The construction would proceed as follows:

- *Site Preparation*: Excavation and grading would be minimal and staged to minimize dust, maintain existing drainage patterns, and ensure stability of the equipment installations.
- *Installation of Fencing*: A permanent security fence would be installed around the perimeter of the Project Site. The eastern and western halves of the Project Site would be separately fenced. Fencing would be designed to allow movement of sensitive wildlife.
- *Access Corridors*: The access corridors would be built using compacted native material to provide access to the panels for maintenance.
- *Installation of Solar Arrays and Inverters*: The solar trackers would be assembled and installed, and the solar panels attached to them. Concrete slabs would be poured at the inverter locations, and the inverter components would installed. Alternatively, prefabricated equipment would be installed on the slab.

- *Electrical Work*: The underground electric lines would be installed to connect the solar arrays with the inverters and the inverters to the substation.
- *Installation of the Substation and Transmission Interconnection*: The onsite substation would be fenced, the area would be covered with gravel, and the substation equipment would be installed. The substation would then be connected directly to the gen-tie line that leads to the PG&E Gates Substation.

*2.6.2.1 **Schedule and Workforce***

Construction would primarily occur during daylight hours—Monday through Friday, between 7:00 a.m. and 6:00 p.m.—as required to meet the construction schedule. Additional time may be necessary to facilitate the schedule. Any construction work performed outside of the normal work schedule would be coordinated with the appropriate agencies and would conform to County regulations regarding noise.

The onsite construction workforce is expected to peak at 200 individuals, who would be onsite at any given time. It is anticipated that the construction workforce would commute to the Project Site each day from local communities and report to the designated construction staging yards prior to the beginning of each workday. Parking for construction personnel would be provided onsite. Portable toilets would be used and would be maintained by a private offsite company during the construction period.

Most workers would commute to the site from nearby communities such as Huron, Coalinga, Lemoore, Visalia, and other cities, towns, or municipalities within commuting distance to the construction site. Workers would travel to the Project Sire using existing roads.

*2.6.2.2 **Site Preparation***

The Project Site has been used for dry farming for the past 20 years and is currently used for grazing. The areas to be developed as access corridors would be smoothed (graded) and compacted. Grading and compaction would also be required at the onsite substation and BESS locations to provide stable bases for the installation of equipment. The primary method of vegetation removal would be to mow existing vegetation, leaving root structures in place. The Project has been designed to maintain existing drainage to the greatest extent practicable. Spot grading using a diesel motor grader would remove small berms. Stormwater retention basins would be prepared using a combination of diesel scrapers, bulldozers, and end-loaders. Grading for drainage and stormwater retention basins would be conducted per County-approved grading and drainage plans. Diversion swales and berms would be prepared at the perimeter of the Project Site using similar heavy equipment. A series of rip-rap cutoff trenches would be constructed perpendicular to natural drainage directions to control erosion within major drainage corridors. Interior access corridors would consist of compacted native soil.

Concrete footings and pads would be required for the inverters, substation transformers, and other equipment. Final concrete specifications would be determined during detailed design engineering. Concrete would be poured throughout the Project Site by truck; the concrete would be purchased from an offsite supplier and transported to the Project Site via concrete trucks.

Construction would begin with the installation of fencing around the perimeter of the Project Site. The perimeter fence would also include signs to provide directions to primary site access. Road corridors, buried electrical lines, solar panel array locations, and the locations of other facilities may be flagged and staked in order to guide construction activities.

*2.6.2.3 **Construction Water Use***

During construction of the Proposed Project, water would be required for common construction-related purposes, including, but not necessarily limited to, dust suppression, soil compaction, and grading. Water may be used as a dust-control measure for ingress and egress of onsite construction vehicle equipment traffic and for the construction of the solar equipment. A sanitary water supply would not be required during construction because restroom facilities would be provided by portable units to be serviced by licensed providers.

During construction and decommissioning, approximately 120 acre-feet of water are estimated to be used for dust control. The Project plans to use an existing, onsite pond (3.25 million-gallon capacity) for water storage during the construction phase and leave it in place during Project operations primarily as a source of water for emergency fire suppression. The pond will need to be replenished periodically, which is estimated to require approximately 2.92 acre-feet per year. Other than replenishing the pond, after construction, no water would be used during the operation of the Project except for annual panel washing, which is estimated to require less than 1 acre-foot per year. Water demand during construction is expected to be the same if the Project is constructed during a year with normal precipitation, a year with less-than-average precipitation, or a multiyear period of less-than-average precipitation.

*2.6.2.4 **Disposal of Construction Materials***

During construction, the building contractor would arrange to have trash, construction material recycling, and regular recycling bins delivered to the site in accordance with County Building Code requirements and guidelines. During construction, every effort would be made to minimize the use and disposal of packing materials and construction material waste. Construction recycling, regular recycling, and non-recyclable trash would be picked up regularly during the construction period. All project components would arrive by truck on pallets and would be removed from the Project Site by the same truck.

2.6.2.5 Hazards and Hazardous Materials Compliance

To limit the exposure of construction workers to hazardous materials (e.g., construction related fuels and paints), construction activities would comply with applicable worker protection laws and regulations, including the Occupational Safety and Health Act, Title 9 of the Code of Federal Regulations, and Title 8 of the California Code of Regulations. The construction contractor selected for the Project would be responsible for ensuring that construction workers are trained in accordance with local, state, and federal requirements for handling hazardous materials. Workers also would be trained to properly identify and handle all hazardous materials. Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste that is shipped offsite for recycling or

disposal would be transported by a licensed and permitted hazardous-waste hauler and disposed of at an approved location.

2.7 Project Operations

Once constructed, the Project would be operated remotely, 7 days per week and 365 days per year. The Project would be outfitted with a suite of sensors, monitoring equipment, and communications gear as part of the Project's SCADA system. This allows the Project to be monitored remotely and in real time by Origis Energy's remote operations center in Austin, Texas, which is a new, state-of-art remote monitoring center designed to provide continuous operations support in accordance with National Electric Reliability Corporation standards. The remote operators would be continually aware of plant output, voltage, and local weather conditions and would receive real-time alerts in the event of abnormal operating conditions, allowing the operators to dispatch technicians as needed.

Onsite O&M activities would consist of responding to abnormal operating conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance (i.e., vegetation control). These activities are anticipated to require one to two site visits per month; the visits would be conducted by a small ground crew. Although the solar portion of the Project operates during daylight hours, it is anticipated that the Project as a whole would operate continuously (24 hours per day, 7 days per week); certain electrical connections within the Project may remain charged at night, and the BESS portion of the Project Site, when charged, can discharge at any time.

2.7.1 Decommissioning

Decommissioning would occur at the end of the Project's useful life. The anticipated operational lifespan of the Project is approximately 35 years with a potential for extended use in accordance with County permitting requirements. A project-specific reclamation plan has been developed for the Project. The reclamation plan assumes that all equipment and facilities within and associated with the Project will be removed. Prior to decommissioning and site reclamation, the Project would require County approval of a post-project condition grading plan in conjunction with the project-specific reclamation plan (Tetra Tech 2024a).

2.7.1.1 Pre-Decommissioning

Pre-decommissioning activities would include removing hazardous materials from the Project Site, including residues that occur in equipment. Hazardous material and petroleum containers, pipelines, and other similar structures shall be rinsed clean, when feasible, and the waste liquid shall be collected for offsite disposal in compliance with applicable regulations, as required.

2.7.1.2 Removal of Facilities

Site decommissioning and equipment removal may take one year or more; therefore, access roads, fencing, electrical power, and the onsite O&M facility will remain in place for use by the decommissioning and restoration workers until no longer needed. These components would be the last to be removed prior to site rehabilitation.

2.7.1.3 Debris Management, Disposal, and Recycling

All removed material and demolition debris will be staged in designated locations within the Project Site boundaries; the materials/debris would then be recycled or disposed of in permitted offsite facilities. All subsurface materials will be removed.

2.7.1.4 Post-Demolition Site Restoration

Once the Project's existing structures and ancillary facilities have been removed, the Project Site will be restored to topographic conditions similar to those prior to construction. To the extent possible, topsoil will be removed prior to site restoration in all work areas then stockpiled, clearly designated, and separated from other excavated materials. The topsoil will be de-compacted to match the density and consistency of the immediate vicinity. The topsoil will be replaced to original depth and reestablished to original surface contours, where possible. All disturbed soil surfaces will be prepared for return to agricultural use.

2.8 Required Permits and Approvals

The following is a list of local, state, and federal discretionary permits and consultations that may be required for the construction and operation of the Project:

- Unclassified CUP (Fresno County)
- Encroachment Permit (Fresno County)
- National Pollutant Discharge Elimination System Construction General Permit (Fresno County)
- Building/Electrical Permit (Fresno County)
- California Department of Transportation (Caltrans) Permit for Transportation of Oversized Loads
- Caltrans Encroachment Permit
- Section 851 Permit or Notice of Construction (California Public Utilities Commission)
- Permit to Construct/Operation (San Joaquin Air Pollution Control District)
- Coordination with California Department of Fish and Wildlife (CDFW) Regarding Swainson's hawk (*Buteo swainsoni*)
    - The Applicant is aware that Swainson's hawk (a state-listed species) is known to occur in the vicinity of the Project Site. The Applicant is committed to coordinating with CDFW to ensure that the Project meets all applicable standards and guidelines for pre- construction, construction, and post-construction phases of the Project.

3.0 ENVIRONMENTAL IMPACT ANALYSIS

This is the main chapter of the Draft Environmental Impact Report (EIR); it discusses the Project's direct, indirect, and cumulative effects for each environmental topic/issue area, which comprise the following:

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

The description of the alternatives begins with an overview of existing conditions on the Project Site and in the surrounding area to provide context for the descriptions and supports the analysis of environmental effects. Determinations regarding levels of significance have been developed for each issue area analyzed in the Draft EIR. These determinations are based upon technical studies and reports prepared for the Proposed Project. ECORP reviewed local/regional plans and ordinances, as well as consulted with representatives from responsible agencies to conduct the environmental analysis.

3.1 Aesthetics

3.1.1 Introduction

This section discusses impacts associated with the potential for the Project to degrade the existing visual character or quality of the Project Area and its surroundings through changes to the existing landscape. Impacts to aesthetics are considered significant if the Proposed Project would do any of the following:

- Cause substantial adverse effects on a scenic vista
- Cause substantial damage to scenic resources within a state scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (i.e., views that are experienced from publicly accessible vantage points)
- In urbanized areas, conflict with applicable zoning and other regulations governing scenic quality
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area

This analysis is based on the following technical document:

- Visual Impact Assessment, San Luis West Solar Project (Tetra Tech 2025b; Appendix D)

3.1.2 Environmental Setting

3.1.2.1 Regional Setting

The landscape in Fresno County ranges from farmlands in the valley and foothill grasslands, to mountainous terrain. Elevations range from approximately 100 feet on the San Joaquin Valley floor, to 4,000 feet in the coastal mountains on the western end of the County, and as high as 14,000 feet in the Sierra Nevada mountain range on the eastern end of the County (Fresno County 2024a). The County is divided geographically into three subregions: the Coastal Range, the Central Valley, and the Sierra Nevada.

The Project Area is located within the Central Valley subregion. The Central Valley consists of a single broad, flat valley that is drained by the San Joaquin River and its tributaries; it is bound by the Sierra Nevada to the east and the Coast Range to the west. Elevations within the Central Valley range from approximately 150 to 450 feet above sea level. Historically, the dominant habitat types were arid grasslands and shrub lands with expansive Valley Oak riparian woodlands and freshwater emergent wetlands in the proximity of water sources. As of July 2025, most of the land in the Central Valley subregion has been converted for agricultural uses (Tetra Tech 2025b).

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as *scenic* based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development affects the enjoyment of the view. According to the California Department of Transportation (Caltrans) Scenic Highway System, no officially designated state scenic highways are located in the vicinity of the Project Area (Caltrans 2024b).

County-Designated Scenic Roadways

The Fresno County General Plan has designated scenic roadways as *landscaped drives*, *scenic drives*, and *scenic highways* to protect and enhance scenic amenities along the County's roads and highways. Landscaped drives are roads bordered by mature, consistent landscaping that have areawide significance. Scenic drives are rural roads that traverse land with outstanding natural scenic qualities and connect with scenic highways. Scenic highways are highways that traverse land with unique or outstanding scenic quality or provide access to regionally significant scenic and recreational areas.

The nearest scenic roadway to the Project Area is I-5; the portion of I-5 that runs through Fresno County has been designated a *scenic highway* (Fresno County 2024a).

3.1.2.2 Local Setting

Visual Character of the Project Area

The Proposed Project is located on privately owned lands that have historically been used for agriculture. The Project Area consists of flat agricultural land used for row crops or fallow land. The Project Area does not contain any permanent crops (such as fruit trees) because it is subject to a flood easement regulated by the Department of Water Resources.

The parcels surrounding the Project Area are also flat, used for agriculture, and contain orchards, row crops, vineyards, and fallow lands. The Pacific Gas & Electric Company (PG&E) Gates Substation is located to the northwest of the Project Area. Existing solar farms are located to the west and north of the Project, and multiple transmission lines traverse the landscape. The California Aqueduct is located to the east of the Project Area. Most roadways in the immediate Project vicinity are unimproved or paved without curb or sidewalk improvements.

Viewer Groups

Viewer groups present within the viewshed of the Project Area include local residents and motorists (travelers). The local resident viewer group consists of people who live within the viewshed of the Project. The closest residences are located along West Jayne Avenue between South Siskiyou Avenue and South Madera Avenue, immediately west of the portion of the Project Subarea C located to the south of West Jayne Avenue. Local residents may be more sensitive to changes in their specific views as a result of the Project.

Motorists/travelers passing through an area typically view the landscape from their motor vehicles and do not tend to stop along their travel routes. Additionally, travelers generally have a narrow field of view because they are focused on road and traffic conditions. Passengers of motor vehicles would have greater opportunities for prolonged offroad views toward landscape features and, accordingly, may have a greater perception of changes in the visual environment.

3.1.3 Regulatory Setting

3.1.3.1 Federal

National Scenic Byways Program

The National Scenic Byways Program—a part of the Federal Highway Administration (FHWA)—recognizes, preserves, and enhances selected roads throughout the U.S. as *All-American Roads* or *National Scenic Byways* based on one or more archaeological, cultural, historic, natural, recreational, and scenic qualities. According to the Federal Highway Administration's America's Byways website, no officially designated National Scenic Byways or All-American Roads are located in the vicinity of the Project Area (FHWA 2024).

3.1.3.2 State

California Scenic Highway Program

State Scenic Highways are highways that are either officially designated or eligible for designation as State Scenic Highways by Caltrans. The *scenic* designation is based on the amount of natural landscape visible by motorists, the scenic quality of the landscape, and the extent to which development intrudes on the motorist's enjoyment of the view (Caltrans 2024b).

3.1.3.3 Local

County of Fresno General Plan

The Open Space and Conservation Element of the County's General Plan focuses on protecting natural resources, preserving open space areas, managing the production of commodity resources, protecting and enhancing cultural resources, and providing recreational opportunities. The following goals and policies are applicable to the Proposed Project:

- *K. Scenic Resources*
  - *Goal OS-K:* To conserve, protect, and maintain the scenic quality of Fresno County and discourage development that degrades areas of scenic quality.
    - *Policy OS-K.1: Scenic Resource Preservation.* 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: Incorporating Scenic Features.* 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.

- *L. Scenic Roadways*

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

    - *Policy OS-L.3: Scenic Roadway Management.* The County shall manage the use of land adjacent to scenic drives and scenic highways based on the following principles:

      (b) Proposed high voltage overhead transmission lines, transmission line towers, and cell towers shall be routed and placed to minimize detrimental effects on scenic amenities visible from the right-of-way.

3.1.4 Impacts Analysis

Potential aesthetic effects are evaluated relative to important visual features (e.g., scenic highways, scenic features) and the existing visual landscape and its users. Degradation of the visual character of a site is assessed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment and any project-related modifications that would alter the visual setting. Visual simulations were created to illustrate various views of the Project Area after buildout of the Project.

The following discussion assesses the Project's aesthetic setting and potential visual or aesthetic impacts, including Potential effects associated with lighting and glare

3.1.4.1 Visual Concepts and Terminology

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. A visual or aesthetic impact may occur depending on the extent to which a project's presence would alter the perceived visual character and quality of the environment.

Table 3.1-1 outlines the terms and concepts used in the impact discussion to describe and assess the aesthetic setting and impacts from the Proposed Project.

Table 3.1-1. Visual Terminology

Term	Description
Contrast	Opposition or unlikeness of different forms, lines, colors, or textures in a landscape.
Contrast Rating	A method of analyzing the potential visual impacts of proposed management activities.
Color	The hues, variety, contrast, and harmony of colors in the visual environment.

Table 3.1-1. Visual Terminology

Term	Description
Distance Zones	Perception of details (e.g., form, line, color, and texture) diminishes with increasing distance. The landscape is subdivided into three distance zones based on relative visibility from travel routes or observation points (FHWA 2015): • Foreground: less than 0.5 mile away • Middle Ground: 0.5 mile to 3–5 miles away • Background: beyond middle ground
Form	The mass or shape of landforms or structures.
Glare	The introduction of features with reflective surfaces has the potential to result in visual impacts. Reflected light can cause glint (i.e., a quick reflection) and glare (i.e., a reflection that lasts for a longer duration), which, depending on the intensity and duration, can create hazards for pilots, air-traffic controllers, motorists, and other potential receptors. Glare can also draw greater attention to objects in a landscape and contribute to visual effects. For the purposes of this analysis, any light reflected off of Project facilities is referred to as *glare*.
Key Observation Point (KOP)	One or a series of publicly accessible points on a travel route or at a sensitive use area, such as a residence, where the view of a project would be representative of viewers in the area and most revealing.
Landscape Visibility	Perception of details (e.g., form, line, color, and texture) diminishes with increasing distance. The distance zone is dependent on the location of the observer relative to a project: • Foreground: 0 to 0.5 mile from point of interest • Middle Ground: 0.5 to 5 miles from point of interest • Background: more than 5 miles from the point of interest
Scenic Highway	Any stretch of public roadway that is designated as a scenic corridor by a federal, state, or local agency.
Scenic Quality	Measure of the visual appeal of a landscape relative to desired scenic values and the abundance or scarcity of similar qualities in the region. In the visual resource inventory process, the apparent scenic quality is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications.
Scenic Vista	An area identified or known for high scenic quality. Scenic vistas may be designated by a federal, state, or local agency. Scenic vistas can also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing.
Sensitive Receptors or Sensitive Viewpoints	Viewer responses to visual settings are inferred from a variety of factors, including distance and viewing angle, type of viewers, number of viewers, duration of view, and viewer activities. The viewer type and associated viewer sensitivity are distinguished among project viewers in recreational, residential, commercial, military, and industrial areas. Viewer activities can range from a circumstance that encourages a viewer to observe the surroundings more closely (such as recreational activities), to discouraging close observation (such as commuting in heavy traffic). Residential viewers typically have extended viewing periods and are generally considered to have moderate to high visual sensitivity; therefore, residential views are typically considered *sensitive receptors*. Viewers from public parks, recreational trails, and/or culturally important sites also have high visual sensitivities; therefore, such locations are considered *sensitive viewpoints*. Viewers in commercial, military, and industrial areas are not typically focused on the views and the areas do not promote enjoyment of views; therefore, viewers in these locations are assumed to have low sensitivity.

Table 3.1-1. Visual Terminology	
Term	**Description**
Sensitivity Level	Measure of public concern for scenic quality. Public lands are assigned high, medium, or low sensitivity levels by analyzing the various indicators of public concern.
Sensitive Viewers	Refers to specific user groups associated with various land uses that have a sensitivity to landscape change and, therefore, could be adversely affected by the construction and operation of a project.
Simulation	A realistic visual portrayal that demonstrates the perceivable changes in landscape features caused by a proposed management activity. This is done using photography, artwork, computer graphics, and other techniques.
Texture	The visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.
Viewer Sensitivity	The overall measure of an existing landscape's susceptibility to adverse visual changes. When viewing the same landscape, people may have different responses to that landscape and any of the proposed visual changes, based upon their values, familiarity, concern, or expectations for that landscape and its scenic quality. Viewing distances between the observer and the viewed object can affect visual sensitivity.
Viewshed	The area within a project's vicinity where viewers would theoretically have visibility toward part or all of the project components. The surrounding geographic area from which a project is likely to be seen, based on topography, atmospheric conditions, land use patterns, and roadway orientations. *Project Viewshed* specifically describes the area surrounding a project area where a person standing on the ground or driving a vehicle can potentially view the project area.
Visual Quality	The relative worth of a landscape from a visual perception point of view.
Visual Resource	The visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features).

Note: FHWA = Federal Highway Administration

Source: Bureau of Land Management 2010

3.1.4.2 Methodology

Visual Contrast Criteria

Potential visual impacts were characterized by determining the level of visual contrast introduced by the Project based on comparing existing conditions and photo simulations. Visual contrast is a means to evaluate the level of modification to existing landscape features. Existing landscape is defined by the visual characteristics (form, line, color, and texture) associated with the landform (including water), vegetation, and existing development.

The Bureau of Land Management's (BLM) Contrast Rating System was used to objectively measure potential changes to the visual environment (BLM 1986). The BLM's Contrast Rating System is commonly used by federal agencies to assess potential visual resource impacts from proposed projects and is widely accepted as a standard approach for analyzing potential changes to the visual environment for non-federal projects.

BLM's Visual Resource Inventory (VRI) classification system is a baseline description of the existing scenic values in the environment. The VRI identifies the visual resources of a given area and based upon specific standards, assigns an inventory class to each area. This process involves rating the resource's visual qualities, measuring public concern, and determining the extent to which an area is visible from travel routes and other observation points (BLM 2010). Those factors then determine which of the four VRI classes are assigned to each area of BLM-administered lands based on visual sensitivity level (high, medium, and low), scenic quality, and distance. The four VRI classes represent the relative values of the existing visual resources. VRI Classes I and II represent the highest visual value, Class III represents moderate value, and Class IV represents relatively low visual value.

During the rating process, each of the seven key factors of scenic quality (i.e., landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications) are ranked on a comparative basis with similar features within the Project Area. The BLM Visual Resource Management approach allows the various landscape elements that comprise visual quality to be quantified and rated with a minimum of ambiguity or subjectivity, which can be easily understood and compared by the reader.

Using the criteria and point values described in Table 3.1-2, the visual quality of the existing visual conditions and the post-Project (*simulated* condition) visual conditions were rated and scored out of 32 points. Views that score a total of 19 points or more are typically considered very high in visual quality (Class I). Views that score a total of 12 to 19 points are typically considered to have a high to above-average level of visual quality (Classes II and III). Finally, views that score a total of 11 points or fewer are typically considered to have average or lower visual quality (Class IV). The scores determine the Project Area's existing visual class, evaluate whether the Project would result in a lower visual class, and determine the degree of change between the existing and post-Project visual conditions.

Table 3.1-2. Visual Quality Rating System – Scenic Quality Inventory and Evaluation Chart

Key Factor	Rating Criteria and Score		
	High	**Average**	**Low**
Landform	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations (including major badlands or dune systems); or detail features dominant and exceptionally striking and intriguing, such as glaciers. **Score 5**	Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional. **Score 3**	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features. **Score 1**

Table 3.1-2. Visual Quality Rating System – Scenic Quality Inventory and Evaluation Chart			
Key Factor	**Rating Criteria and Score**		
	High	**Average**	**Low**
Vegetation	A variety of vegetative types as expressed in interesting forms, textures, and patterns. **Score 5**	Some variety of vegetation, but only one or two major types. **Score 3**	Little or no variety or contrast in vegetation. **Score 1**
Water	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape. **Score 5**	Flowing or still, but not dominant in the landscape. **Score 3**	Absent or present, but not noticeable. **Score 0**
Color	Rich color combinations, variety, or vivid color; or pleasing contrasts in the soil, rock, vegetation, water, or snow fields. **Score 5**	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element. **Score 3**	Subtle color variations, contrast, or interest; generally mute tones. **Score 1**
Influence of Adjacent Scenery	Adjacent scenery greatly enhances visual quality **Score 5**	Adjacent scenery moderately enhances overall visual quality. **Score 3**	Adjacent scenery has little or no influence on overall visual quality. **Score 0**
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc. ***Score 5+**	Distinctive, though somewhat similar to others within the region. **Score 3**	Interesting within its setting, but fairly common within the region. **Score 1**
Cultural Modifications	Modifications add favorably to visual variety while promoting visual harmony. **Score 2**	Modifications add little or no visual variety to the area, and introduce no discordant elements. **Score 0**	Modifications add variety, but are very discordant and promote strong disharmony. **Score -4**

Note: * A rating of greater than 5 can be given but must be supported by written justification.

Source: Bureau of Land Management 2010

The Proposed Project has been evaluated based on the level of contrast that Project elements exhibit compared to the existing visual character of the Project Area and vicinity. The level of visual contrast can be measured by changes in the visual characteristics that would occur as a result of the Project. The greater the difference between the character elements found within the existing landscape and with the

Proposed Project, the more apparent the level of visual contrast. The following general criteria were used when evaluating the degree of contrast:

- *None*: The contrast is not visible or perceived.
- *Weak*: The contrast can be seen but does not attract attention.
- *Moderate*: The element's contrast begins to attract attention and begins to dominate the characteristic landscape.
- *Strong*: The element's contrast demands attention, would not be overlooked, and is dominant in the landscape.

In general, visual impacts are determined based on the following criteria:

- What is the level of sensitivity of the viewers? The reaction to the level of contrast the Project introduces is increased by the level of sensitivity.
- What is the level of contrast the Project introduces to the existing visual character of the Project Area and vicinity? Does the Project attract attention and to what degree does it dominate the landscape? If the Project is not visible or perceived, there is no visual impact.
- If the Project does attract attention and begins to dominate the landscape, what are the changes to the Project Area's visual class? Does implementation of the Project reduce the Project Area's visual class to a lower level (e.g., reducing the visual class from Class I to Class II)?
- If the viewer sensitivity and the Project contrast are moderate to high, and if implementation of the Project results in lowering the visual class, impacts are likely to be significant.

Key Observation Points/Viewshed

Key Observation Points (KOPs) were identified based on locations from which the Project infrastructure would potentially be visible and noticeable to the casual observer. A casual observer is considered an observer who is not actively looking or searching for the Project but is engaged in activities at locations with potential views of the Project. If the Project components are not noticeable to the casual observer, visual impacts can be considered minor to negligible (i.e., weak).

The six KOPs identified in Table 3.1-3 were selected as representative vantage points on the landscape with publicly accessible views of the Project Area (Figure 3.1-1). Factors considered in the selection of KOPs included locations with sensitive viewers and potential Project Area visibility. Photographs were taken from the selected KOP locations to support the discussion on existing visual setting and the analysis of potential visual impacts associated with the Project (Figures 3.1-2 through 3.1-7). Photographs of existing conditions were taken on February 29, 2024 using a full-frame, digital, single-lens reflex camera with a fixed 50-millimeter lens (or equivalent).

Table 3.1-3. Key Observation Points

KOP	Location	View	Description
KOP 1	Intersection of West Jayne Avenue and I-5, approximately 1.6 miles west of the Subarea A.	East	As shown in Figure 3.1-2, the existing landscape setting is characterized by flat agricultural land. Existing built features include roadways, transmission and utility poles and lines, street lighting, street signs, and agricultural structures. Vegetation includes grasses, shrubs, and trees (orchards). The dominant colors of the landscape are brown and green, whereas the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregularly shaped shrubs and trees. The trees are planted in uniform, linear rows. The linear and horizontal lines associated with the built features are visible and prominent from this viewpoint. KOP 1 provides a typical view for drivers traveling along I-5 and eastward on West Jayne Avenue. Considering the short duration of visibility of the Project Area while driving along these roadways, viewers would have a low sensitivity to the visual changes in the Project Area.
KOP 2	Intersection of West Jayne Avenue and SR-269/South Lassen Avenue, with the Subarea A to the west and Subarea B to the northeast.	North	As shown on Figure 3.1-3, the existing landscape setting is characterized by flat agricultural land. Existing built features include roadways, transmission and utility poles and lines, street lighting, fencing, and agricultural structures. Vegetation includes grasses and trees (orchards). The dominant colors of the landscape are brown and green, whereas the structures are gray and brown. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The trees are planted in uniform, linear rows. The linear and horizontal lines associated with the built features are visible and prominent from this viewpoint. KOP 2 provides a typical view for drivers traveling eastward or westward on West Jayne Avenue and northward on SR-269/South Lassen Avenue. Considering the short duration of visibility of the Project Area while driving along the roadways, viewers would have a low sensitivity to the visual changes in the Project Area.
KOP 3	On West Jayne Avenue, between South Siskiyou Avenue and South Madera Avenue, immediately west of the Project Area Subarea C.	East	As shown on Figure 3.1-4, the existing landscape setting is characterized by flat agricultural land. Existing built features include roadway, transmission and utility poles and lines. Vegetation includes row crops, grasses, and trees (orchards). The dominant colors of the landscape are brown and green, whereas the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The trees and row crops are planted in uniform, linear rows. The linear and horizontal lines associated with the built features are visible and prominent from this viewpoint. KOP 3 provides a typical view for drivers traveling eastward on West Jayne Avenue and for the residents located adjacent to this KOP to the west. Considering the short duration of visibility of the Project Area while driving along the roadways, viewers would have a low sensitivity to the visual changes in the Project Area. Considering the frequent viewing by local residents, viewers would have a moderate sensitivity to the visual changes in the Project Area.

Table 3.1-3. Key Observation Points

KOP	Location	View	Description
KOP 4	On West Jayne Avenue, just west of the California Aqueduct, immediately east of the Project Area Subarea C.	West	As shown on Figure 3.1-5, the existing landscape setting is characterized by flat agricultural land with distant hills and mountains in the background. Existing built features include roadway, transmission and utility poles and lines, and residential and agricultural structures. Vegetation includes row crops, grasses, shrubs, and trees (orchards). The dominant colors of the landscape are brown and green, whereas the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The trees and row crops are planted in uniform linear rows. The linear and horizontal lines associated with the built features are visible and prominent from this viewpoint. KOP 4 provides a typical view for drivers traveling westward on West Jayne Avenue. Considering the short duration of visibility of the Project Area while driving along the roadways, viewers would have a low sensitivity to the visual changes in the Project Area.
KOP 5	Intersection of SR-269/South Lassen Avenue and West Tractor Avenue, approximately 1 mile north of the Project Area Subarea B.	South	As shown on Figure 3.1-6, the existing landscape setting is characterized by flat agricultural land with distant hills and mountains in the background. Existing built features include roadway, solar facilities, transmission and utility poles and lines, and agricultural structures. Vegetation includes grasses and trees (orchards). The dominant colors of the landscape are brown and green, whereas the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The trees are planted in uniform linear rows. The linear and horizontal lines associated with the built features are visible and prominent from this viewpoint. KOP 4 provides a typical view for drivers traveling southward on SR-269/South Lassen Avenue and West Tractor Avenue. Considering the short duration of visibility of the Project Area while driving along the roadways, viewers would have a low sensitivity to the visual changes in the Project Area.
KOP 6	Intersection of SR-269/South Lassen Avenue and West Goodrich Avenue, approximately 1.6 miles southeast of the Project Area Subarea A and 1 mile south of Subarea B.	North	As shown on Figure 3.1-7, the existing landscape setting is characterized by flat agricultural land. Existing built features include roadway, solar facilities, transmission and utility poles and lines, and agricultural structures. Vegetation includes grasses and trees (orchards). The dominant colors of the landscape are brown and green, whereas the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The trees are planted in uniform linear rows. The linear and horizontal lines associated with the built features are visible and prominent from this viewpoint. KOP 6 provides a typical view for drivers traveling northward on SR-269/South Lassen Avenue and West Goodrich Avenue. Considering the short duration of visibility of the Project Area while driving along the roadways, viewers would have a low sensitivity to the visual changes in the Project Area.

Notes KOP = Key Observation Point; SR = State Route

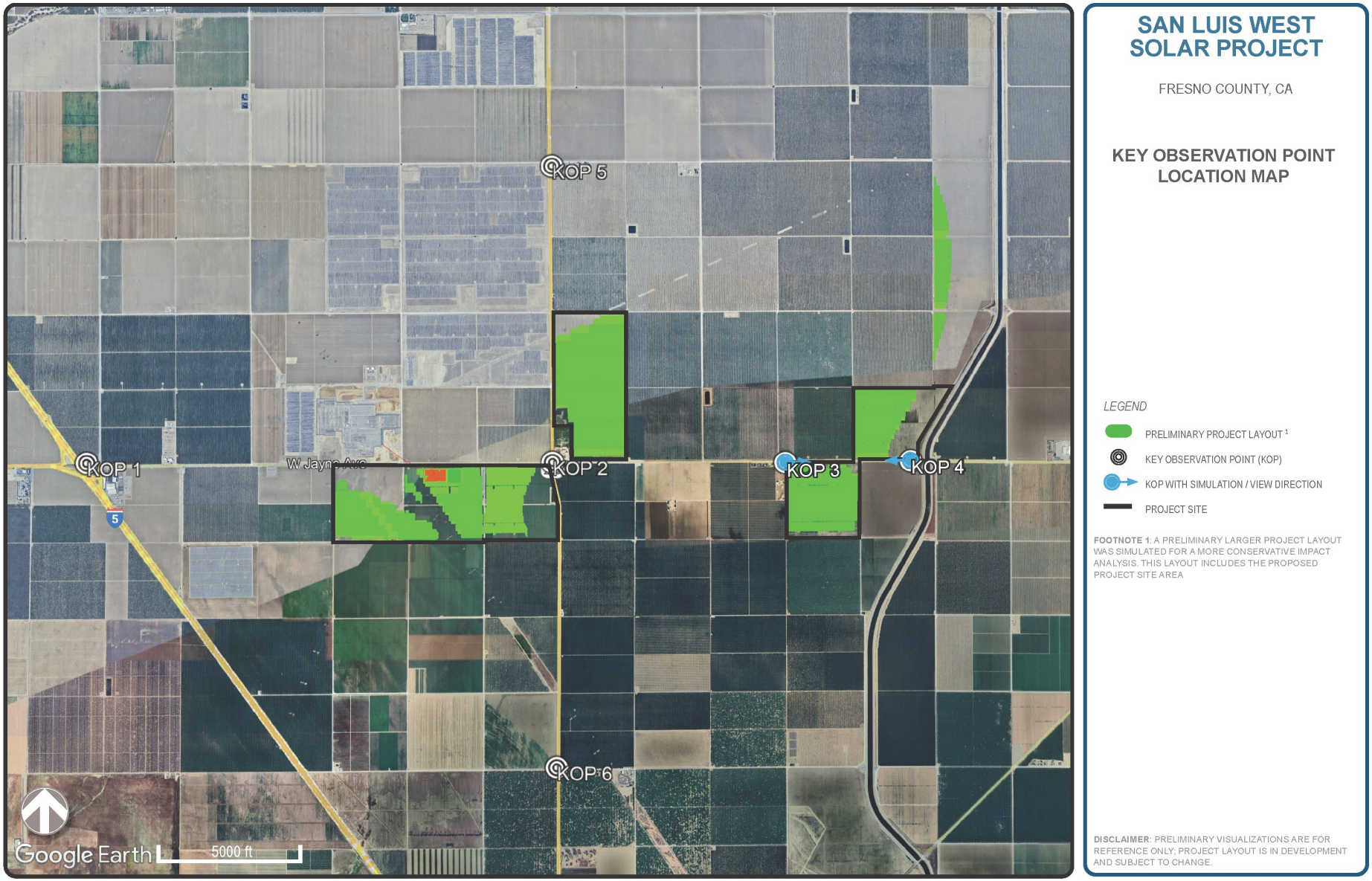

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Figure 3.1-1. Key Observation Point Locations

2024-137 SLW Solar + BESS

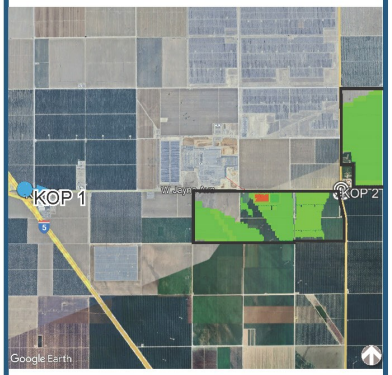


View east from I-5 and West Jayne Avenue

SAN LUIS WEST SOLAR PROJECT

KOP 1

EXISTING CONDITIONS



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	9:58 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	EAST
LATITIUDE:	36.137899°
LONGITUDE:	-120.157931°
DISTANCE FROM PROJECT:	8,690 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT IS IN DEVELOPMENT AND SUBJECT TO CHANGE.

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Figure 3.1-2. KOP 1: Existing Condition

2024-137 SLW Solar + BESS



View north from intersection of West Jayne Avenue and SR-269/South Lassen Avenue

SAN LUIS WEST SOLAR PROJECT

KOP 2

EXISTING CONDITIONS



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	10:36 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTH
LATITIUDE:	36.137937°
LONGITUDE:	-120.102777°
DISTANCE FROM PROJECT:	870 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT IS IN DEVELOPMENT AND SUBJECT TO CHANGE.

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Figure 3.1-3. KOP 2: Existing Condition

2024-137 SLW Solar + BESS



View east from West Jayne Avenue, between S. Siskiyou Avenue and S. Madera Avenue

SAN LUIS WEST SOLAR PROJECT

KOP 3

EXISTING CONDITIONS



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	11:09 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	EAST
LATITIUDE:	36.137879°
LONGITUDE:	-120.075138°
DISTANCE FROM PROJECT:	190 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT IS IN DEVELOPMENT AND SUBJECT TO CHANGE.

Figure 3.1-4. KOP 3: Existing Condition

2024-137 SLW Solar + BESS



View west from West Jayne Avenue, just west of the California Aqueduct

SAN LUIS WEST SOLAR PROJECT

KOP 4

EXISTING CONDITIONS



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	11:27 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	WEST
LATITIUDE:	36.138028°
LONGITUDE:	-120.060248°
DISTANCE FROM PROJECT:	900 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT IS IN DEVELOPMENT AND SUBJECT TO CHANGE.

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Figure 3.1-5. KOP 4: Existing Condition

2024-137 SLW Solar + BESS

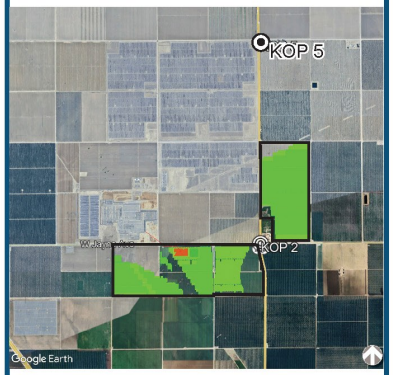


View south from intersection of SR- 269/South Lassen Avenue and West Tractor

SAN LUIS WEST SOLAR PROJECT

KOP 5

EXISTING CONDITIONS



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	11:49 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	SOUTH
LATITIUDE:	36.166462°
LONGITUDE:	-120.102831°
DISTANCE FROM PROJECT:	6,220 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT IS IN DEVELOPMENT AND SUBJECT TO CHANGE.

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Figure 3.1-6. KOP 5: Existing Condition

2024-137 SLW Solar + BESS



View north from intersection of SR- 269/South Lassen Avenue and West Goodrich

SAN LUIS WEST SOLAR PROJECT

KOP 6

EXISTING CONDITIONS



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	12:06 PM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTH
LATITIUDE:	36.108862°
LONGITUDE:	-120.102308°
DISTANCE FROM PROJECT:	8,300 FT

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Figure 3.1-7. KOP 6: Existing Condition

2024-137 SLW Solar + BESS

Visual Simulations

Three-dimensional visual simulations from three of the KOPs (KOPs 1, 3, and 4) were produced to approximate the visual conditions that would result from Project implementation for the following reasons:

- KOP 1 represents views to the east along West Jayne Avenue and is the best view from the County Scenic Highway, I-5. Because views of the Project Area from KOP 1 are completely obscured by existing structures and vegetation in the foreground, the Project Area is highlighted in yellow (Figure 3.1-8).
- KOP 3 represents the nearest residential location to the Project Area and provides views from West Jayne Avenue to the east (Figure 3.1-9).
- KOP 4 represents views to the west, along West Jayne Avenue (Figure 3.1-10).
- Simulations were not produced for KOP 2 due to intervening vegetation. Simulations were similarly not produced for KOPs 5 and 6 because the views of the Project Area would be limited due to distance and intervening vegetation; these would not attract attention due to the numerous transmission lines and/or solar facilities nearby.

Using the photographs taken at each KOP, a three-dimensional physical massing model was created that incorporated the solar module scale model. The model was then georeferenced and placed on GPS-controlled, site-specific photographs to create simulations that demonstrate visual changes from the Project (Figures 3.1-8, 3.1-9, and 3.1-10).

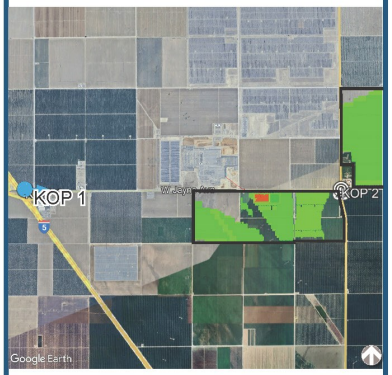


Simulated view east from I-5 and West Jayne Avenue
Project Location Highlighted. The Project Area is obscured by existing vegetation and structures.

SAN LUIS WEST SOLAR PROJECT

KOP 1

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	9:58 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	EAST
LATITIUDE:	36.137899°
LONGITUDE:	-120.157931°
DISTANCE FROM PROJECT:	8,690 FT

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Figure 3.1-8. KOP 1: Photo Simulation

2024-137 SLW Solar + BESS



Simulated view east from West Jayne Avenue , between S. Siskiyou Avenue and S. Madera Avenue

SAN LUIS WEST SOLAR PROJECT

KOP 3

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	11:09 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	EAST
LATITIUDE:	36.137879°
LONGITUDE:	-120.075138°
DISTANCE FROM PROJECT:	190 FT

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Figure 3.1-9. KOP 3: Photo Simulation

2024-137 SLW Solar + BESS



Simulated view west from West Jayne Avenue, just west of the California Aqueduct

SAN LUIS WEST SOLAR PROJECT

KOP 4

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PRELIMINARY PROJECT LAYOUT
- KOP LOCATION
- PROJECT SITE

PHOTOGRAPH INFORMATION

TIME:	11:27 AM
DATE:	2/29/2024
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	WEST
LATITIUDE:	36.138028°
LONGITUDE:	-120.060248°
DISTANCE FROM PROJECT:	900 FT

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Figure 3.1-10. KOP 4: Photo Simulation

2024-137 SLW Solar + BESS

3.1.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, noise impacts are considered significant if implementation of the Proposed Project would result in any of the following:

- Substantial adverse effects on a scenic vista
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway
- In non-urbanized areas, substantially degraded existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point); or in urbanized areas, result in a conflict with applicable zoning and other regulations governing scenic quality
- A new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

3.1.4.4 Impact Discussion

Threshold 1: Would the project have a substantial adverse effect on a scenic vista?

The Project Area consists of agricultural land and is surrounded by other agricultural land and solar-energy-generation land uses. The Project Area is not a designated scenic vista, and no designated scenic vistas are located within visible distance of the Project Area; therefore, no impact would occur.

Threshold 2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No officially designated or eligible state scenic highways are located in the vicinity of the Project Area (Caltrans 2024b). The County's General Plan identifies the portion of I-5 in Fresno County as a locally designated scenic highway (Fresno County 2024a). Figure 3.1-2 shows the typical views of the Project Area from I-5. Drivers on I-5 would view the Project Area while traveling at a high rate of speed, based on the posted speed limit of 65 miles per hour. Although the Project would convert agricultural land that contributes to the area's scenic views, the Project components would not be visible from I-5 due to the facility's low profile and the presence of vegetation and structures (Figure 3.1-8).

In compliance with the Solar Facilities Guidelines, the Applicant would acknowledge the County's Right to Farm Ordinance and record a Right to Farm Notice. To facilitate a return to agricultural uses after the lifespan of the Project, a Reclamation Plan has been prepared detailing the removal of Project improvements and specific measures to return the site to its condition prior to construction (Tetra Tech 2024a; Appendix C). The Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway; therefore, impacts would be less than significant.

Threshold 3: Would the project in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

During construction and operations, the Project, where visible and noticeable, may introduce visual contrast and could have the potential to create visual effects within the surrounding areas. Visual simulations of the Project were produced from KOPs 1, 3, and 4 to approximate the visual conditions that would result from Project implementation (Figures 3.1-8 through 3.1-10). Based on the field visit and photographs of the existing conditions, these KOPs had shown the most potential for views of the Project from public vantage points.

Construction

Construction activities would include vegetation clearing and grubbing, grading of access roads, and installation of Project components. Construction staging would be established as needed for parking, construction uses, and storage. Project construction is expected to take approximately 9 months. These visual changes would be transient and short-term in nature. Impacts would be less than significant.

Operations

Completion of the Project would introduce new visual elements into the Project Area. These include solar components consisting of modules, tracking systems, and posts; overhead collector lines; a substation; access and service roads; fencing; gates; security lighting; an Operations and Maintenance (O&M) building; and a battery energy storage system.

KOP 1

Figures 3.1-2 and 3.1-8 present the existing and simulated views of Project Subareas A and B from KOP 1. Due to the orchards located between the Project Area and I-5, the Project Area would not be visible from this location; therefore, no impact would occur.

KOP 2

The Project Subarea B would be visible to the northeast from this location along West Jayne Avenue and SR-269/South Lassen Avenue by a casual observer. The Project would introduce light and dark gray colors, geometric shapes, and horizontal lines into the landscape setting. The colors, regular geometric forms, and horizontal lines associated with the solar arrays would result in a visual contrast with the irregular, organic forms and colors of the existing vegetation but would be consistent with the horizontal lines associated with the orchards and row crops. Structures located in the vicinity possess horizontal and vertical lines and gray colors (roadway, transmission and utility poles and lines, fencing, street lighting, and agricultural structures). Table 3.1-4 provides an analysis of potential visual impacts.

Table 3.1-4. Visual Quality Rating Analysis – KOP 2			
Rated Feature	**Pre-Development Score**	**Post-Development Score**	**Score Difference**
Landform	**1**	**1**	**0**
Explanation	Project Area and surrounding land are flat.	Post-development the Project Area would remain flat.	—
Detail	No substantial change to the landforms in the Project Area would result from Project implementation.		
Vegetation	**1**	**1**	**0**
Explanation	Project Area limited to low-lying row crops or ruderal vegetation. A row of trees is adjacent offsite.	While the amount would be reduced, a crop cover type of vegetation would be used in the Project Area. No trees removed.	—
Detail	There would be little contrast between the existing and developed features in vegetation.		
Water	**0**	**0**	**0**
Explanation	No water bodies are present on the Project Subarea B site. Pond is located on Subarea A but not visible from this location.	The Project would not introduce water to the Project Area or remove the pond located on Subarea A.	—
Detail	The existing pond located on Subarea A is not visible from this location.		
Color	**2**	**2**	**0**
Explanation	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures.	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures. Project would add dark and light gray structures.	—
Detail	The dominant colors in the Project Area from this viewpoint are green (low-lying vegetation) and gray (energy facilities). Other gray, brown, and white structures are adjacent offsite. The Project would increase the amount of gray, adding similar muted colors.		
Adjacent Scenery	**1**	**1**	**0**
Explanation	Adjacent scenery provides views of orchards, row crops, and energy facilities.	Adjacent scenery provides views of orchards, row crops, and energy facilities.	—
Detail	Adjacent scenery consists of orchards, row crops, and agricultural and energy facilities. The Project would replace views of row crops in the Project Area with energy storage facilities, however, adjacent scenery would still be visible.		
Scarcity	**1**	**1**	**0**
Explanation	Similar viewsheds throughout the region. No unique or unusual aspects.	Similar viewsheds throughout the region. No unique or unusual aspects.	—
Detail	Existing views of row crops, agricultural and energy facilities are typical of the area and are not unique or unusual.		

Table 3.1-4. Visual Quality Rating Analysis – KOP 2			
Rated Feature	**Pre-Development Score**	**Post-Development Score**	**Score Difference**
Cultural Modifications	**-1**	**-2**	**1**
Explanation	Human-caused modifications in this view include utility and transmission lines and structures, fencing, residential structure. These features are somewhat discordant with the surrounding landscape but common.	The Project would increase human-caused modifications in this view with the introduction of energy storage facilities that would replace the row crops.	—
Detail	The existing view exhibits human-caused modifications to the agricultural landscape. The Project would introduce views of energy storage facilities. The Project would be slightly discordant with the row crops but due to the solar facilities, utility and transmission lines and structures in the immediate area would not be an unexpected modification.		
Totals	**5**	**4**	**1**

Note: KOP = Key Observation Point

Where the views of the Project are not blocked by adjacent orchards, travelers along these roadways would have a short duration to view the Project Area and are expected to have a low viewer sensitivity to the visual changes in the Project Area.

During most of the day, the solar panels would be oriented closer to a horizontal alignment that allows views through the Project Area and reduces attention to and contrast from the Project. When the panels are at maximum tilt, the Project would begin to attract attention to the casual observer. However, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape, including the solar facilities to the west of SR-269/South Lassen Avenue and would not block views of the surrounding agricultural land.

The muted colors of the Project would be consistent with and contribute to blending into the landscape. The scenic quality of KOP 2, both under existing conditions and post-development of the Project, is identified as low (Class IV). The only key visual quality factor that would change is Cultural Modifications, as the Project elements would add artificial elements consistent with the surrounding built environment but would be slightly discordant with row crops and adjacent orchards. As shown in Table 3.1-4, visual quality would be reduced from a rating of 5 to 4, remain low, and not result in a change in visual class. None of the views from KOP 2 are protected or designated as significant scenic resources by the federal, state, or county regulations. Therefore, the Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings and would result in a less than significant visual impact.

KOP 3

Figures 3.1-4 and 3.1-9 show the existing and simulated views of Project Subarea C components from KOP 3. The Project would be visible to the east from KOP 3 along West Jayne Avenue by a casual

observer. The Project would introduce light and dark gray colors, geometric shapes, and horizontal lines into the landscape setting. The colors, regular geometric forms, and horizontal lines associated with the solar arrays would result in a visual contrast with the irregular, organic forms and colors of the existing vegetation but would be consistent with the horizontal lines associated with the orchards and row crops. Existing structures in the vicinity possess horizontal and vertical lines and gray colors (roadway and transmission and utility poles). Table 3.1-5 provides the analysis of potential visual impacts for KOP 3.

Table 3.1-5. Visual Quality Rating Analysis – KOP 3

Rated Feature	Pre-Development Score	Post-Development Score	Score Difference
Landform	**1**	**1**	**0**
Explanation	Project Area and surrounding land are flat.	Post-development the Project Area would remain flat.	—
Detail	No substantial change to the landforms in the Project Area would result from Project implementation.		
Vegetation	**1**	**1**	**0**
Explanation	Project Area limited to low-lying row crops or ruderal vegetation.	While the amount would be reduced, a crop cover type of vegetation would be used in the Project Area.	—
Detail	There would be little contrast between the existing and developed features in vegetation.		
Water	**0**	**0**	**0**
Explanation	No water bodies are present on the Project Subarea C site. Small pond is located on Subarea A but not visible from this location.	The Project would not introduce water to the Project Area or remove the small pond located on Subarea A.	—
Detail	The existing pond located on Subarea A is not visible from this location.		
Color	**2**	**2**	**0**
Explanation	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures.	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures. Project would add dark and light gray structures.	—
Detail	The dominant colors in the Project Area from this viewpoint are green (low-lying vegetation) and gray (transmission and utility poles). The Project would increase the amount of gray, adding similar muted colors.		
Adjacent Scenery	**1**	**1**	**0**
Explanation	Adjacent scenery provides views of orchards and transmission and utility poles.	Adjacent scenery provides views of orchards, row crops, and transmission and utility poles.	—

Table 3.1-5. Visual Quality Rating Analysis – KOP 3			
Rated Feature	**Pre-Development Score**	**Post-Development Score**	**Score Difference**
Detail	Adjacent scenery consists of orchards and transmission and utility poles. The Project would replace views of row crops in the Project Area with energy storage facilities, however, adjacent scenery would still be visible.		
Scarcity	**1**	**1**	**0**
Explanation	Similar viewsheds throughout the region. No unique or unusual aspects.	Similar viewsheds throughout the region. No unique or unusual aspects.	—
Detail	Existing views of orchards and row crops are typical of the area and are not unique or unusual.		
Cultural Modifications	**-1**	**-3**	**2**
Explanation	Human-caused modifications in this view include utility and transmission lines and structures, fencing, residential structure. These features are somewhat discordant with the surrounding landscape but common.	The Project would increase human-caused modifications in this view with the introduction of energy storage facilities that would replace the row crops.	—
Detail	The existing view exhibits human-caused modifications to the agricultural landscape. The Project would introduce views of energy storage facilities. The Project would be slightly discordant with the row crops but due to the solar facilities, utility and transmission lines and structures in the immediate area would not be an unexpected modification.		
Totals	**5**	**3**	**2**

Note: KOP = Key Observation Point

As previously described, the solar panels would be oriented closer to a horizontal alignment during most of the day. This allows views through the Project Area which reduces attention to and contrast from the Project. Therefore, the panels would introduce a weak contrast during most of the day. When the panels are at maximum tilt, the Project would attract attention to the casual observer and co-dominate the landscape resulting in a moderate to strong contrast. However, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the surrounding agricultural land. Where the views of the Project are not blocked by adjacent orchards, travelers along these roadways would have a short duration to view the Project Area and are expected to have a low viewer sensitivity to the visual changes in the Project Area.

Existing structures and trees would partially to completely obscure views of the Project from the adjacent residences. Where the Project is visible, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of agricultural lands in the background. Residential viewers would have a moderate sensitivity to the visual changes in the Project Area.

The muted colors of the Project would be consistent with and contribute to blending into the landscape. The scenic quality of KOP 3, both under existing conditions and post-development, is identified as low (Class IV). The only key visual quality factor that would change is Cultural Modifications, as the Project elements would add artificial elements consistent with the surrounding built environment but would be slightly discordant with row crops and adjacent orchards. As shown in Table 3.1-5, visual quality would be reduced from a rating of 5 to 3, remain low, and not result in a change in visual class. None of the views from KOP 3 are protected or designated as important or significant scenic resources by the federal, State, or County regulations. Therefore, the Project would not substantially degrade the existing visual character or quality of public views of the Project Area and its surroundings and would result in a less than significant impact.

KOP 4

Figures 3.1-5 and 3.1-10 present the existing and simulated views of Project Subarea C components from KOP 4. The Project would be visible to the west from this location along West Jayne Avenue by a casual observer. The Project would introduce light and dark gray colors, geometric shapes, and horizontal lines into the landscape setting. The colors, regular geometric forms, and horizontal lines associated with the solar arrays would result in a visual contrast with the irregular, organic forms and colors of the existing vegetation but would be consistent with the horizontal lines associated with the orchards and row crops. Existing structures in the vicinity possess horizontal and vertical lines and gray colors (roadway, and transmission and utility poles, and agricultural and residential structures). Table 3.1-6 provides an analysis of potential visual impacts for KOP 4.

Table 3.1-6. Visual Quality Rating Analysis – KOP 4

Rated Feature	Pre-Development Score	Post-Development Score	Score Difference
Landform	**1**	**1**	**0**
Explanation	Project Area and surrounding land are flat.	Post-development the Project Area would remain flat.	—
Detail	No substantial change to the landforms in the Project Area would result from Project implementation.		
Vegetation	**1**	**1**	**0**
Explanation	Project Area limited to low-lying row crops or ruderal vegetation.	While the amount would be reduced, a crop cover type of vegetation would be used in the Project Area.	—
Detail	There would be little contrast between the existing and developed features in vegetation.		
Water	**0**	**0**	**0**
Explanation	No water bodies are present on the Project Subarea C site. Pond is located on Subarea A but not visible from this location.	The Project would not introduce water to the Project Area or remove the pond located on Subarea A.	—
Detail	The existing pond located on Subarea A is not visible from this location.		

Table 3.1-6. Visual Quality Rating Analysis – KOP 4			
Rated Feature	**Pre-Development Score**	**Post-Development Score**	**Score Difference**
Color	**2**	**2**	**0**
Explanation	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures.	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures. Project would add dark and light gray structures.	—
Detail	The dominant colors in the Project Area from this viewpoint are green and brown (low-lying vegetation) and brown and gray (transmission and utility poles). The Project would increase the amount of gray, adding similar muted colors.		
Adjacent Scenery	**1**	**0**	**0**
Explanation	Adjacent scenery provides views of orchards, transmission and utility poles, and agricultural and residential structures.	Adjacent scenery provides views of orchards, row crops, transmission and utility poles, and agricultural and residential structures.	—
Detail	Adjacent scenery consists of orchards, transmission and utility poles, and agricultural and residential structures. The Project would replace views of row crops in the Project Area with energy storage facilities. During the majority of the day, adjacent scenery would still be visible. At maximum tilt, views of orchard and agricultural and residential structures would be partially blocked.		
Scarcity	**1**	**1**	**0**
Explanation	Similar viewsheds throughout the region. No unique or unusual aspects.	Similar viewsheds throughout the region. No unique or unusual aspects.	—
Detail	Existing views of orchards and row crops are typical of the area and are not unique or unusual.		
Cultural Modifications	**-1**	**-2**	**1**
Explanation	Human-caused modifications in this view include utility and transmission lines and structures, fencing, residential structure. These features are somewhat discordant with the surrounding landscape but common.	The Project would increase human-caused modifications in this view with the introduction of energy storage facilities that would replace the row crops.	—
Detail	The existing view exhibits human-caused modifications to the agricultural landscape. The Project would introduce views of energy storage facilities. The Project would be slightly discordant with the row crops but due to the solar facilities, utility and transmission lines and structures in the area would not be an unexpected modification.		
Totals	**5**	**3**	**2**

Note: KOP = Key Observation Point

During most of the day, the panels would be oriented closer to a horizontal alignment that allows views through the Project Area, thus reducing attention to and contrast from the Project. Therefore, during most of the day, the panels would introduce a weak contrast. When the panels are at maximum tilt, the Project would begin to attract attention to the casual observer and begin to co-dominate the landscape resulting in a moderate contrast. However, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and for most of the day, would not block views of the surrounding agricultural land. Where the views of the Project are not blocked by adjacent orchards, travelers along these roadways would have a short duration to view the Project Area and are expected to have a low viewer sensitivity to the visual changes in the Project Area.

The muted colors of the Project would be consistent with and contribute to blending into the landscape. The scenic quality of KOP 4, both under existing conditions and post-development of the Project, is identified as low (Class IV). The key visual quality factors that would change are Adjacent Scenery and Cultural Modifications. For Adjacent Scenery, during the majority of the day, adjacent scenery would still be visible. At maximum tilt, views of orchard and agricultural and residential structures would be partially blocked. For Cultural Modifications, (i.e., humanmade modifications) the Project elements would add artificial elements consistent with the surrounding built environment but would be slightly discordant with row crops and adjacent orchards. As shown in Table 3.1-6, visual quality would be reduced from a rating of 5 to 3, remain low, and not result in a change in visual class. None of the views from KOP 4 are protected or designated as important or significant scenic resources by the federal, state, or county regulations. Therefore, the Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings and would result in a less than significant impact.

KOP 5

Due to the existing orchards located between KOP 5 and the Project, the Project would not be visible from this location and no impact would occur.

KOP 6

Existing orchards are located between KOP 6 and the Project, therefore little, if any, of the Project is expected to be visible by a casual observer. Where visible, the Project would introduce light and dark gray colors, geometric shapes, and horizontal lines into the landscape setting. The colors, regular geometric forms, and horizontal lines associated with the solar arrays would result in a visual contrast with the irregular, organic forms and colors of the existing vegetation but would be consistent with the horizontal lines associated with the orchards and row crops. Existing structures in the vicinity possess horizontal and vertical lines and gray colors (roadway, solar facilities, transmission and utility poles and lines, and agricultural structures). Table 3.1-7 provides an analysis of potential visual impacts for KOP 6.

Table 3.1-7. Visual Quality Rating Analysis – KOP 6

Rated Feature	Pre-Development Score	Post-Development Score	Score Difference
Landform	**1**	**1**	**0**

Table 3.1-7. Visual Quality Rating Analysis – KOP 6			
Rated Feature	**Pre-Development Score**	**Post-Development Score**	**Score Difference**
Explanation	Project Area and surrounding land are flat.	Post-development the Project Area would remain flat.	—
Detail	No substantial change to the landforms in the Project Area would result from Project implementation.		
Vegetation	**1**	**1**	**0**
Explanation	Project Area limited to low-lying row crops or ruderal vegetation.	While the amount would be reduced, a crop cover type of vegetation would be used in the Project Area.	—
Detail	There would be little contrast between the existing and developed features in vegetation.		
Water	**1**	**1**	**0**
Explanation	Pond is located on Subarea A.	The Project would not introduce water to the Project Area or remove the pond located on Subarea A.	—
Detail	The existing pond located on Subarea A would not be removed, however, it is not likely to be visible from this location.		
Color	**2**	**2**	**0**
Explanation	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures.	Muted color with little variation: green and brown associated with vegetation; gray, brown, and white associated with structures. Project would add dark and light gray structures.	—
Detail	The dominant colors in the Project Area from this viewpoint are green and brown (low-lying vegetation) and brown and gray (roadway, solar facilities, transmission and utility poles and lines, and agricultural structures). The Project would increase the amount of gray, adding similar muted colors.		
Adjacent Scenery	**1**	**1**	**0**
Explanation	Adjacent scenery provides views of row crops, orchards, transmission and utility poles, solar facilities, and agricultural structures.	Adjacent scenery provides views of row crops, orchards, transmission and utility poles, solar facilities, and agricultural structures.	—
Detail	Adjacent scenery consists of orchards, transmission and utility poles, and agricultural and residential structures. The Project would replace views of row crops in the Project Area with energy storage facilities. During the majority of the day, adjacent scenery would still be visible. At maximum tilt, views of orchard and agricultural and residential structures would be partially blocked.		
Scarcity	**1**	**1**	**0**

Table 3.1-7. Visual Quality Rating Analysis – KOP 6			
Rated Feature	**Pre-Development Score**	**Post-Development Score**	**Score Difference**
Explanation	Similar viewsheds throughout the region. No unique or unusual aspects.	Similar viewsheds throughout the region. No unique or unusual aspects.	—
Detail	Existing views of orchards and row crops are typical of the area and are not unique or unusual.		
Cultural Modifications	**-1**	**-1**	**1**
Explanation	Human-caused modifications in this view include utility and transmission lines and structures, fencing, residential structure. These features are somewhat discordant with the surrounding landscape but common.	The Project would increase human-caused modifications in this view with the introduction of energy storage facilities that would replace the row crops, however, views of the Project would be limited and appear as an extension of the existing solar facilities.	—
Detail	The existing view exhibits human-caused modifications to the agricultural landscape. The Project would introduce views of energy storage facilities. The Project would be slightly discordant with the row crops but due to the solar facilities, utility and transmission lines and structures in the area would not be an unexpected modification.		
Totals	**6**	**6**	**1**

Note: KOP = Key Observation Point

During most of the day, the panels would be oriented closer to a horizontal alignment that allows views through the Project Area, reducing attention to and contrast from the Project. Therefore, during most of the day, the panels would introduce a weak contrast. When the panels are at maximum tilt, if visible, the Project may begin to attract attention to the casual observer but would appear as a continuation of existing solar facilities, resulting in a weak contrast. However, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the surrounding agricultural land. Where the views of the Project are not blocked by adjacent orchards, travelers along these roadways would have a short duration of viewing the Project Area and are expected to have a low viewer sensitivity to the visual changes in the Project Area.

The muted colors of the Project would be consistent with and contribute to blending into the landscape. The scenic quality of KOP 6, both under existing conditions and post-development of the Project, is identified as low (Class IV). As shown in Table 3.1-7, visual quality would remain the same at a rating of 6 and not result in a change in visual class. None of the views from KOP 6 are protected or designated as important or significant scenic resources by the federal, State, or County regulations. Therefore, the Project would not substantially degrade the existing visual character or quality of public views of the Project Area and its surroundings and would result in a less than significant impact.

Decommissioning

Decommissioning would be conducted in accordance with the County-approved decommissioning plan for the Project. Decommissioning activities would be similar in nature and duration as those associated with construction activities. Temporary changes are associated with the removal of all aboveground structures, fencing, and debris. These visual impacts would be short-term in nature and are not considered to be significant. After the equipment removal activities, the Project Area would be returned to substantially the same condition as prior to development.

Threshold 4: Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

The Project is not expected to create a substantial new source of nighttime lighting or daytime glare. Unlike solar thermal facilities, which rely on large fields of mirrors to reflect light, the potential reflection from photovoltaic (PV) modules is inherently low since they are designed to capture and not to reflect sunlight. PV solar panels have a lower index of refraction/reflectivity than common sources of glare in residential environments. The glare and reflectance levels from a given PV system are lower than the glare and reflectance levels of steel, snow, standard glass, plexiglass, and smooth water (Shields 2010). The glare and reflectance levels of modules are further reduced with the application of anti-reflective coatings. PV suppliers typically use stippled glass for panels as the "texturing" of the glass to allow more light energy to be channeled/transmitted through the glass while weakening the reflected light. With the application of anti-reflective coatings and use of modern glass technology, project PV panels would display overall low reflectivity. In addition, because tracker systems follow the sun, the underside of the PV panels and most of the structure supporting them are shadowed throughout the day.

Moreover, light reflected from the PV panels would travel above the line of site of most, if not all, viewers. PV tracking systems position the array so that the sun's rays are always perpendicular to the face of the panel. What light is reflected from the panels is reflected back towards the sun. During midday conditions, when the sun is high in the sky, the rays of the sun are reflected directly upwards. For example, when the sun is low on the horizon (near dawn or dusk), the sun's angle in the sky is low; however, reflected rays would still be directed away from ground-level receptors because the maximum downward angle of the arrays would not be below 30 degrees. Similarly, and also due to their low reflectivity, the panels are not expected to cause visual impairment for motorists on area roadways. With the application of anti-reflective coatings, the Project would display overall low reflectivity.

The Proposed Project would provide external safety lighting at the primary access points for both normal and emergency conditions. Project lighting would be designed to provide the minimum illumination needed to achieve safety and security and would be downward facing and shielded to focus illumination in the immediate area. All lighting associated with the Proposed Project would be subject to County approval and compliance with County requirements. Therefore, impacts would be less than significant.

3.1.5 Mitigation Measures

No mitigation measures are required.

3.1.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.2 Agriculture and Forestry Resources

3.2.1 Introduction

This section discusses the potential for the Project to affect agriculture and forestry resources. According to Appendix G of the CEQA Guidelines, impacts to agriculture and forestry resources would be considered significant if the Proposed Project would:

- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use;
- conflict with existing zoning for agricultural use or a Williamson Act contract;
- conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production;
- result in the loss of forest land or conversion of forest land to non-forest use; or
- 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.

This analysis is based on the following technical document:

- Agricultural Conversion Study, San Luis West Solar Project (Tetra Tech 2025a; Appendix B).

3.2.2 Environmental Setting

3.2.2.1 Regional Setting

The Proposed Project Area is located in the Central Valley region of Fresno County (County), California. Historically, the dominant habitat types in this area were arid grasslands and shrub lands with expansive Valley Oak riparian woodlands and freshwater emergent wetlands in the proximity of water sources. Fresno County is the most agriculturally rich county in the U.S., with approximately 2,165,797 acres of its total approximately 3,847,040 acres (6,011 square miles) () of land in agricultural use. Of this acreage, approximately 1,346,199 acres—accounting for 56 percent of the County area—have the following Important Farmland designations: Prime Farmland (663,706 acres), Farmland of Statewide Importance (385,283 acres), Unique Farmland (95,048), and Farmland of Local Importance (202,162 acres) (California Department of Conservation [DOC] 2024).

3.2.2.2 Local Setting

The Proposed Project Area is located on privately owned lands historically used for agriculture. The Project Area is located on portions of seven parcels totaling approximately 1,400 acres within the AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) and AE-40 (Exclusive Agriculture, 40-acre minimum parcel size) zoning districts of unincorporated Fresno County; however, the Project Area is approximately

1,100 acres (Fresno County 2024). The Project Area encompasses all areas of temporary and permanent impacts. The DOC's California Important Farmland Finder lists most of the Project Area as Prime Farmland, with some smaller areas designated as Semi-Agricultural and Rural Commercial Land (DOC 2024). Table 3.2-1 provides the acreages of the Proposed Project Area within each California Important Farmland designation. The Project Area parcels are currently subject to the Williamson Act (Figure 3.2-1).

Table 3.2-1. California Important Farmland

Category	Acreage
Prime Farmland	1,091
Semi-Agricultural and Rural Commercial Land	6
Vacant or Disturbed Land	3
Total Acres	**1,100**

Source: Tetra Tech 2025a

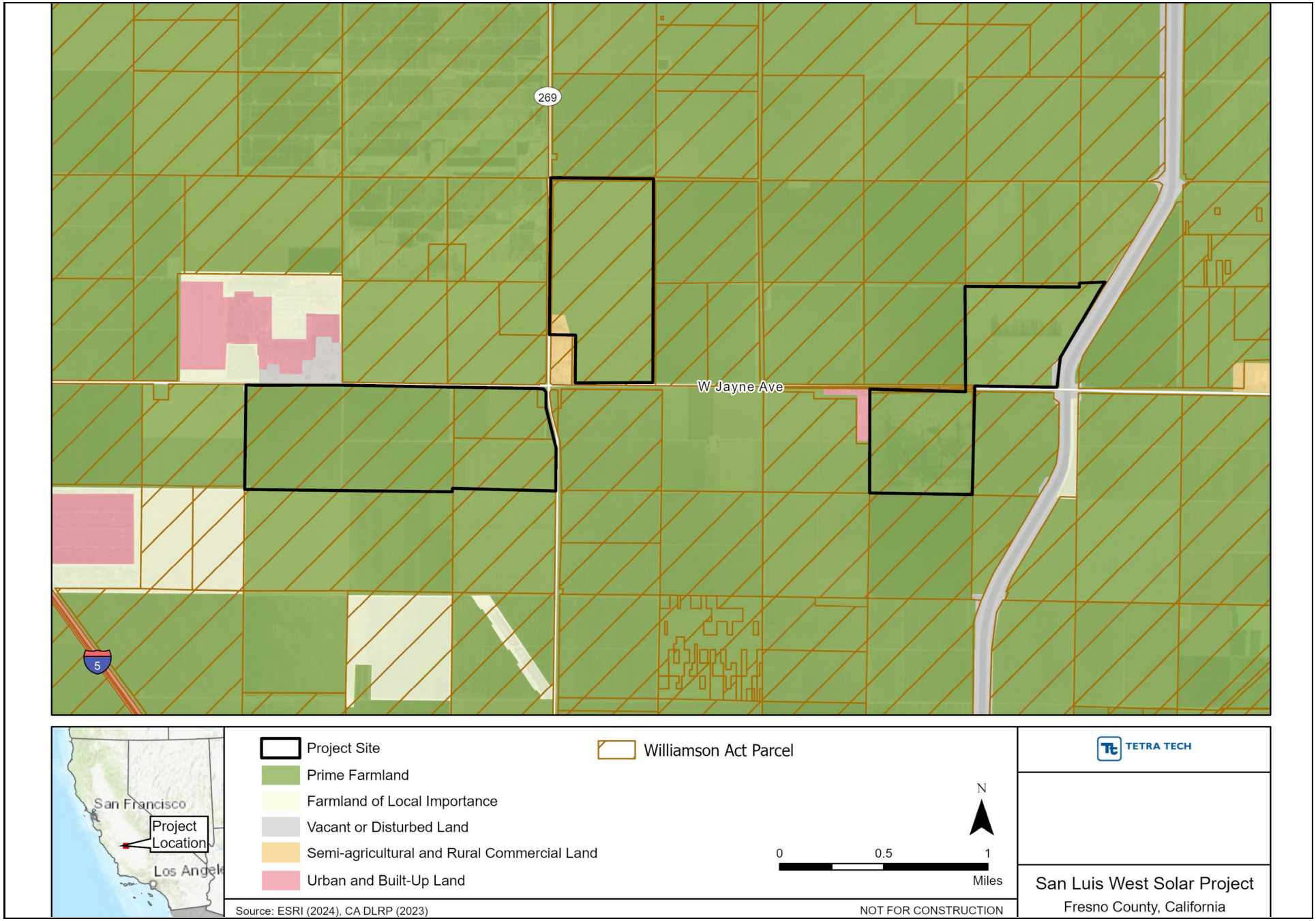
Soils

A review of the Natural Resources Conservation Service (NRCS) Web Soil Survey data indicated that four soil units are mapped within the Project Area, and are designated as Prime Farmland if irrigated (NRCS 2024):

- *Kimberlina sandy loam, 0 to 2 percent slopes (425):* This soil is a deep, well-drained soil that develops on a parent material of alluvium derived from calcareous sedimentary rock. It has a common soil profile generally up to 72 inches deep. This soil is not considered to be hydric but is identified as Prime Farmland if irrigated.
- *Excelsior sandy loam, 0 to 2 percent slopes (445):* This soil is a deep, well-drained soil that develops on a parent material of alluvium derived from calcareous coarse-loamy alluvium derived from sedimentary rock. It has a common soil profile generally up to 72 inches deep. This soil is not considered to be hydric but is identified as Prime Farmland if irrigated.
- *Excelsior sandy loam, sandy substratum, 0 to 2 percent slopes (447):* This soil is a deep, well-drained soil that develops on a parent material of alluvium derived from calcareous sedimentary rock. It has a common soil profile generally up to 72 inches deep. This soil is not considered to be hydric but is identified as Prime Farmland if irrigated.
- *Westhaven loam, 0 to 2 percent slopes (474):* This soil is a deep, well-drained soil that develops on a parent material of alluvium derived from calcareous sedimentary rock. It has a common soil profile generally up to 72 inches deep. This soil is not considered to be hydric but is identified as Prime Farmland if irrigated.

The NRCS Web Soil Survey data indicated that all of the specific soil units within the Project Area would be designated as Prime Farmland if irrigated, and the land use data for the area indicates that the Project

Area and surrounding lands are all used for cultivated crops and have been historically irrigated (Tetra Tech 2025h).



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ENVIRONMENTAL CONSULTANTS

Figure 3.2-1. Important Farmland Designations/ Williamson Act Contracts

2024-137 SLW Solar + BESS

3.2.3 Regulatory Setting

3.2.3.1 Federal

There are no applicable federal regulations for this issue area.

3.2.3.2 State

California Land Conservation Act of 1965

The California Land Conservation Act of 1965 (Williamson Act, Government Code Section 51200 et seq.) prevents farmland from conversion to other uses by offering owners of agricultural land a property tax incentive to maintain their land in agricultural use. The Williamson Act is a state program implemented at the county level that allows agricultural landowners to voluntarily and contractually agree to retain land included in an agricultural preserve in agricultural or open space uses for a period of at least 10 years and, in return, to pay reduced property taxes. The term of the contract automatically renews each year, such that unless it is specifically nonrenewed or canceled, the contract always has a 10-year period horizon.

The most common method for withdrawing from a Williamson Act contract is filing a notice of nonrenewal, which can be initiated by either the land use agency or the landowner. Under this process, the contract terminates after a 9-year nonrenewal period over which taxes gradually increase each year. A Williamson Act contract cancellation is an option under limited circumstances and conditions set forth in Government Code Section 51280 et seq. In such cases, landowners may petition the board or council of their county or city for cancellation of the Williamson Act contract. The board or council may grant tentative cancellation only if it makes one of the following required statutory findings (Government Code Section 51282[a]):

1. That the cancellation is consistent with the purposes of Section 51282. Cancellation of a contract is consistent if the board or council makes all of the following findings:
    a. That the cancellation is for land on which a notice of nonrenewal has been served pursuant to Section 51245.
    b. That cancellation is not likely to result in the removal of adjacent lands from agricultural use.
    c. That cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan.
    d. That cancellation will not result in discontiguous patterns of urban development.
    e. That there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

2. That cancellation is in the public interest. Cancellation of a contract is in the public interest if the council or board makes the following findings:

    a. that other public concerns substantially outweigh the objectives of this chapter; and

    b. that there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

The board or council must consider comments from the director of the DOC, if they are provided, before acting on a proposed cancellation. A cancellation becomes final and the board or council issues a Certificate of Cancellation upon the completion of all Conditions of Approval.

The DOC provides guidance regarding the placement of solar facilities on agricultural land (DOC 2023). As discussed in *Solar Power and the Williamson Act*, the Williamson Act does not specifically address the placement of solar power generation facilities on land subject to it; however, depending on the specific characteristics of a particular facility and the wishes of the landowner, there are five options in which a solar power generation facility may be located on land subject to the Williamson Act:

- First, locating a solar power generation facility on land within an agricultural preserve may be allowed as a compatible use depending on the local rules governing compatibility. This is a discretionary action of the local government.
- Second, the landowner may provide notice of nonrenewal to the city or county administering the Williamson Act contract on the land, and eventually remove the Williamson Act's restrictions over use of the land.
- Third, the contract may be "cancelled" pursuant to required statutory processes under appropriate circumstances. Here, in almost all cases, the landowner would be responsible for paying a cancellation fee.
- Fourth, a public agency with the power of eminent domain may acquire land subject to a Williamson Act contract (through eminent domain or in-lieu of eminent domain), thereby "nullifying" the contract and rendering the land free from the contract's restrictions.
- Fifth, a Solar Use Easement may be entered into simultaneously with rescinding a Williamson Act or Farmland Security Zone contract. This is a discretionary action of the local government.

Farmland Security Zone Act

The California State Legislature passed the Farmland Security Zone Act in 1999 to ensure that long-term farmland preservation is part of public policy (Government Code sections 51296 to 51297.4). Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone contracts must be for an initial term of at least 20 years.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a need for assessing agricultural lands and informing decisions affecting the conversion of these lands over time. The FMMP regularly reports on the conversion of farmland and grazing lands, provides maps, and maintains a database system to record and report changes in the use of agricultural lands throughout California. The goal of the FMMP is to provide consistent, timely, and accurate data to decision-makers for use in planning for the present and future of California's agricultural land resources. To meet this goal, the FMMP provides maps and statistical data to the public, academia, and government agencies to assist them in making informed decisions for the utilization of California's farmland.

The U.S. Department of Agriculture's (USDA) NRCS began Important Farmland mapping efforts in 1975 that now continue through the FMMP. The intent of these efforts was to produce agricultural resource maps based on soil quality and land use across the U.S. As part of this nationwide mapping effort, NRCS developed a series of definitions known as the Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land's suitability for agricultural production, which includes physical and chemical characteristics of soils as well as specified land use characteristics. Important farmland maps are derived from NRCS soil survey maps using LIM criteria.

Important Farmlands

The FMMP compiles Important Farmland maps pursuant to the provisions of Section 65570 of the California Government Code. These maps utilize data from the NRCS Web Soil Survey and current land use information using eight mapping categories (five relating to farming and three associated with nonagricultural purposes) to represent an inventory of agricultural resources in Fresno County. These categories include:

- *Prime Farmland* – Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- *Farmland of Statewide Importance* – 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.
- *Farmland of Local Importance* – Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

- *Grazing Land* – Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
- *Urban and Built-Up Land* – Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- *Other Land* – Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development with greater than 40 acres mapped as Other Land. Other Land subcategories include Semi-Agricultural and Rural Commercial Land and Vacant or Disturbed Land.
- *Water* – Perennial water bodies with an extent of at least 40 acres.

Fresno County General Plan

The County's General Plan Agriculture and Land Use Element describes land use designations and development standards for land in unincorporated Fresno County and establishes goals, policies, and programs related to agriculture and land use. The land use designation for the Project Area is Agriculture, which provides for the production of crops and livestock and for the location of necessary agriculture commercial centers, agricultural processing facilities, and certain non-agricultural activities (Fresno County 2024). The following goal, policies, and program related to agriculture apply to the Project:

- *Goal LU-A:* To promote the long-term conservation of productive and potentially productive agricultural lands and to accommodate agricultural-support services and agriculturally related activities that support the viability of agriculture and further the County's economic development goals.
    - *Policy LU-A.1: Agricultural Land Conservation.* The County shall maintain agriculturally designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available or can be provided consistent with the adopted General or Community Plan.
    - *Policy LU-A.2: Agriculture-related Uses.* The County shall allow by right, in areas designated Agriculture, activities related to the production of food and fiber and support uses incidental and secondary to the onsite agricultural operation.
    - *Policy LU-A.3: Special Agricultural Uses.* The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally related activities, including

value-added processing facilities, and certain non-agricultural uses. Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria:

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

- *Policy LU-A.12: Agricultural Protection*. In adopting land uses policies, regulations, and programs, the County shall seek to protect agricultural activities from encroachment of incompatible land uses.
- *Policy LU-A.13: Agricultural Buffers*. The County shall protect agricultural operations from conflicts with non-agricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations. Additionally, the County shall consider buffers between agricultural uses and proposed sensitive receptors when processing discretionary land use applications.
- *Policy LU-A.14: Agricultural Land Conversion Review*. The County shall ensure that the review of discretionary permits includes an assessment of the conversion of productive agricultural land and that mitigation be required where appropriate.
- *Policy LU-A.16: Agricultural Land Preservation Programs*. The County should implement agricultural land preservation programs for long-term conservation of viable agricultural operations. Examples of programs to be considered include: land trusts; conservation easements; dedication incentives; new and continued Williamson Act contracts; Farmland Security Act contracts; the California Farmland Conservancy Program; agricultural education programs; zoning regulations; agricultural mitigation fee program; urban growth boundaries; transfer of development rights; purchase of development rights; and agricultural buffer policies.
- *Policy LU-A.17: Williamson Act Contracts*. The County should accept Williamson Act contracts on all designated agricultural land subject to location, acreage, and use limitations established by the County, provided that the County receives full subvention payment as partial replacement of local property tax revenue foregone as a result of participating in the Williamson Act program. All development and uses and activities that occur on land under contract shall comply with the requirements of the California Land Conservation Act and adopted County Rules.

- *Policy LU-A.19: Reduced Soil Erosion.* The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the NRCS, Resource Conservation Districts, University of California Cooperative Extension, and other agencies and organizations.
- *Policy LU-A.23: Farmland Conversion.* For discretionary land use projects that are not directly related to or supportive of agricultural uses and which propose the permanent conversion of 20 acres or more of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (as designated by the FMMP) to nonagricultural uses, the County shall consider and adopt feasible measures including, but not limited to:
  - Acquisition of conservation easements at a 1:1 ratio for lands lost to non-agricultural uses.
  - Fee title of agricultural mitigation land that may be held by a third party or the County.
  - In-lieu fees paid to the County that may be used to acquire future mitigation property.
  - Mitigation banks.

  The County may exempt projects from agricultural mitigation requirements when it has been determined that conversion is occurring pursuant to a local groundwater sustainability plan, or the project is for housing which is predominately for persons of low or moderate income as defined in section 50093 of the Health and Safety Code. Further, the County may exempt discretionary land use projects from agricultural mitigation requirements if it finds that the loss of agricultural land caused by the proposed conversion is outweighed by specific overriding economic, legal, social, technological, or other benefits of the conversion, as contemplated by Public Resources Code (PRC) 21081(b).

Fresno County Solar Facilities Guidelines

Fresno County has guidelines for solar facilities with the rationale that the need to accommodate new renewable energy technology must be balanced with the need to protect Important Farmlands and minimize impacts to existing agricultural operations. The land use process for evaluating solar facilities should rely on general guidelines and policies rather than specific standards, which may not be flexible enough to accommodate the evolving technology (Fresno County 2017).

According to the Fresno County Solar Facilities Guidelines, applicants for solar facilities shall address the following as part of the application review process:

1. Information shall be submitted regarding the historical agricultural operational/usage of the parcel, including specific crop type and crop yield, for the last 10 years (if no agricultural operation in the last 10 years, specify when land was last in agricultural use).
2. Information shall be submitted that identifies the source of water for the subject parcel (surface water from irrigation district, individual well[s], conjunctive system). If the source of water is via district delivery, the applicant shall submit information documenting the allocations received from

the irrigation district and the actual disposition of the water (i.e., utilized onsite or moved to other locations) for the last 10 years. If an individual well system is used, provide production capacity of each well, water quality data and data regarding the existing water table depth.

3. Identify the current status of the parcel (Williamson Act Contract, Conservation Easement, retired land, etc.), the purpose of any easement, and limitations of the parcel. The applicant shall submit a Title Report or Lot Book Guarantee for verification.

4. Identify (with supporting data) the current soil type and mapping units of the parcel pursuant to the standards of the California State Department of Conservation and the Natural Resources Conservation Service.

5. List all proposed measures and improvements intended to create a buffer between the proposed solar facility and adjacent agricultural operations (detailed information must be shown on Site Plan) and provide factual/technical data supporting the effectiveness of said proposed buffering measures.

6. Provide a Reclamation Plan detailing the lease life, timeline for removal of the improvements, and specific measures to return the site to the agricultural capability prior to installation of solar improvements.

7. Provide information documenting efforts to locate the proposed solar facility on non-agricultural lands and non-contracted parcels and detailed information explaining why the subject site was selected.

8. Develop and submit a project site Pest Management Plan to identify methods and frequency to manage weeds, insects, disease, and vertebrate pests that may impact adjacent sites.

9. The applicant must acknowledge the County's Right to Farm Ordinance and shall be required to record a Right to Farm Notice prior to issuance of any permits. This shall be included as a recommended Condition of Approval of the land use entitlement.

10. Note: The life of the approved land use permit will expire upon expiration of the initial life of the solar lease. If the solar lease is to be extended, approval of new land use permit will need to be obtained.

11. If the project is approved, the applicant shall make all reasonable efforts to establish a point of sale in Fresno County for equipment and construction related items necessary for the project.

12. If the project is approved, the applicant shall make all reasonable efforts to conduct local recruitment efforts and/or coordinate with employment agencies in an attempt to hire from the local workforce.

13. In addition to disclosing the number of trips in the required project Operational Statement, the applicant shall disclose the weight of the shipments anticipated to the site. If the project is approved, pursuant to the CEQA analysis and based upon the existing road conditions and the weight/frequency of shipments to the site, the applicant shall mitigate impacts to County roads.

14. If the project is approved, the applicant shall make all reasonable efforts to purchase products and equipment from local (Fresno County) manufacturing facilities and/or vendors.

Fresno County Right-to-Farm Notice

It is the declared policy of Fresno County to preserve, protect, and encourage the development of its agricultural land and industries for the production of food and other agricultural products. Residents of property in or near agricultural districts should be prepared to accept the inconveniences and discomfort associated with normal farm activities. Consistent with this policy, California Civil Code 3482.5 (Right-to-Farm Act) provides that an agricultural pursuit, as defined, maintained for commercial uses shall not be or become a nuisance due to a changed condition in a locality after such agricultural pursuit has been in operation for 3 years.

3.2.4 Impacts Analysis

3.2.4.1 Methodology

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Land Evaluation and Site Assessment (LESA) model (DOC 1997) prepared by the DOC as an optional model to use in assessing impacts on agriculture and farmland.

To assess potential impacts to agriculture and farmland, the County has considered and relied on the results of Project-specific LESA modeling (Appendix B), site-specific zoning, and mapping available pursuant to the FMMP of the California Resources Agency. To assess potential impacts to forest resources, the County considered site zoning, site-specific environmental characteristics, and applicable definitions set forth in state law.

The California Agricultural LESA Model comprises six different factors: two Land Evaluation factors and four Site Assessment factors. The two Land Evaluation factors are based on measures of soil resource quality that are separately rated: the USDA Land Capability Classification (LCC) Rating and the Storie Index Rating. The LCC groups are made according to the limitations of the soils when used to grow crops and the risk of damage to soils when used in agriculture. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). The Storie Index Rating is based on surface and subsurface chemical and physical soil properties and surface landscape characteristics of the soil only. The Storie Index Rating considers four factors that represent the inherent characteristics and qualities of the soil: profile characteristics (permeability, available water capacity, and depth of the soil), texture of the surface layer, slope, and other factors (e.g., drainage, salinity). The LESA Model is weighted so that 50 percent of the total LESA score of a given project is derived from the Land Evaluation factors, and 50 percent from the Site Assessment factors. For a given project, each of these factors is separately rated on a 100-point scale based on qualities as they relate to agricultural suitability. A score of 100 has the highest suitability. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points.

3.2.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would result in significant impacts to agriculture and forestry resources if it would:

- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- conflict with existing zoning for agricultural use, or a Williamson Act contract;
- 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 Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g]);
- result in loss of forest land or conversion of forest land to non-forest use; or
- involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

3.2.4.3 Impact Discussion

Threshold 1: Would the project 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?

As discussed in Section 3.2.2.2, the DOC's California Important Farmland Finder lists approximately 1,091 acres of the Project Area as Prime Farmland (DOC 2024). Tetra Tech prepared a LESA analysis to evaluate impacts to Farmland located within the Project Area (Appendix B). Table 3.2-2 summarizes the Project's final LESA score.

Table 3.2-2. California Important Farmland

Factors	Factor Scores	Factor Weight (%)	Weighted Factor Scores
Land Evaluation Factors			
Land Capability Classification	100	25%	25
Storie Index	92.2	25%	23
		Land Evaluation Subtotal	**48**
Site Assessment Factors			
Project Size	100	15%	15

Table 3.2-2. California Important Farmland			
Factors	**Factor Scores**	**Factor Weight (%)**	**Weighted Factor Scores**
Water Resource Availability	65	15%	9.75
Surrounding Agricultural Land	100	15%	15
Protected Resource Land	100	5%	5
		Site Assessment Subtotal	**44.7**
		Final Land Evaluation and Site Assessment Score	**92.7**

Source: Tetra Tech 2025a

A final LESA score ranging from 80 to 100 points is considered significant. The Project's final LESA score was 92.7, thus considered significant.

The Project's Agricultural Conversion Study (Tetra Tech 2025a) conservatively assumes that the entire 1,100-acre Project Area would be converted to non-agricultural use for a minimum of 35 years. Construction and operation of the Project would take the Project's acreage out of production for at least 35 years; however, construction and operation of the Proposed Project would not adversely affect the environmental characteristics of the Project Area that qualify it for mapping as Prime Farmland on the basis of its Storie Index Rating.

The chemical and physical soil properties of the Project Area would remain substantially the same under Project conditions. Soil chemical properties primarily include concentrations of specific chemicals such as phosphorus, nitrogen, carbon, and other nutrients. The Project does not propose application of fertilizers or other soil amendments. Water-based dust suppression or appropriate soil stabilizers would be used for dust suppression. Residual pesticides are likely present in soils within the Project Area; however, the Project's proposed weed management and rodent control methods, as described in the Project's Pest Management Plan (Tetra Tech 2024b), would not exacerbate them. Therefore, Project construction, operation, and maintenance is not expected to affect the chemical composition of soils within the Project Area.

Physical properties of soil include color, texture, structure, porosity, density, consistency, stability, and temperature. The Project proposes no changes that would affect soil color; however, grading would result in soil compaction to provide a stable base for the proposed structures, equipment, and roads. At the end of the Project's useful life, the Project would be decommissioned, and site restoration would take place following the Project's Reclamation Plan (Tetra Tech 2024a). Once the existing structures of the Project and ancillary facilities have been removed, site restoration activities would take place with the goal of restoring the natural topography, vegetative cover, and hydrologic function of the Project Area to a condition as close as possible to that prior to Project installation. The topsoil would be de-compacted and amended, as necessary, to match the density and consistency of the immediate surrounding area. The topsoil would be replaced to original depth, and the original surface contours reestablished, where

possible. Any topsoil deficiency and trench settling would be mitigated with additional topsoil consistent with the quality of the affected area. As such, the soil compaction that would occur during construction and operation would be corrected during decommissioning, resulting in a less-than-significant impact to the physical properties of soils within the Project Area because, unlike an urban project (e.g., subdivision), Project implementation would not affect the Project Area's long-term suitability for agricultural use. Prior to Project decommissioning and site reclamation, the Project would require County approval of a post-Project condition grading plan in conjunction with the Project-specific Reclamation Plan decommissioning and site restoration.

Project impacts to soil permeability and depth would be limited to grading activities during construction and would be corrected during Project decommissioning and site restoration. The implementation of the Project's County-approved Reclamation Plan would ensure that the texture of surface soils is returned to a condition suitable for agricultural use. The Project Area is and would remain generally flat.

The Project would be designed to reduce impacts associated with drainage or erosion to less than significant and would comply with applicable laws and standards for the protection of the environment as well as conditions of approval imposed by the County. This design would further ensure that the Project would not adversely affect the environmental characteristics of the Project Area that qualify it for mapping as Prime Farmland on the basis of its Storie Index Rating; therefore, impacts related to the conversion of Prime Farmland to non-agricultural use would be less than significant.

Threshold 2: Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Zoning

The Project Area is located within the AE-20 and AE-40 zones. AE zones are intended to protect agricultural land and provide for those uses that are necessary for and an integral part of an agricultural operation. These zone are also intended to protect the general welfare of the agricultural community from encroachments of non-related agricultural uses. AE zones are consistent with the Agriculture, Irrigated Agriculture, and Westside/Eastside Rangeland land use designations of the County's General Plan (Fresno County 2024a). Within these zoning districts, the County permits utility-scale solar energy uses with a Conditional Use Permit (CUP); therefore, solar energy facilities are considered to be a compatible use.

Williamson Act Contracts

The Project Area parcels are subject to Williamson Act contracts and have been petitioned for cancellation by the landowners as part of the Project. Approval of the Petition for Cancellation would be required prior to development of the Project; if the Fresno County Board of Supervisors determines that cancellation of the contract is to the public benefit (per Government Code §51282[a]), no conflict with Williamson Act contracted land or farmland conversion would occur, and impacts would be less than significant with approval.

Noncontracted Land

Information required to support the Williamson Act contract cancellation includes documentation of an applicant's efforts to search for available, suitable, proximate, and noncontracted land for the proposed use and information explaining why noncontracted sites were not selected. San Luis West Solar, LLC (Applicant) undertook an extensive search to find proximate noncontracted lands that were both available and suitable for the proposed use. The Applicant has established criteria for site selection for solar development that reflect economic, environmental, and operational objectives. These criteria include the following:

- A substation with sufficient capacity must be available to provide a Point of Interconnection (POI) in reasonably close proximity to load centers (within 75 to 100 miles).
- The site must be located as close as possible to the Pacific Gas and Electric Company (PG&E) Gates Substation, although sites up to 4 miles from the PG&E Gates Substation were considered.
- The site must be of sufficient size to support an economically viable utility-scale project. Combinations of contiguous parcels were considered.
- The land must have an open and relatively flat landscape (less than 15 percent slope across the majority of the site) and cannot contain any permanent structures that cannot be removed (e.g., housing, historic buildings, and industrial facilities).
- The site must have legal access, and site control (either purchase or lease) can be secured.
- The site must not contain sensitive habitat.

The Applicant began the search for proximate noncontracted land by first identifying a potential substation for the POI. This is a key criterion because substation facilities and gen-tie line upgrades can be extremely costly and have the potential to undermine a project's economic viability. Gen-tie line upgrade costs are largely passed onto the ratepayer over the life of a project; thus, connecting to a pre-existing substation with available capacity is in the public's best interest. The Applicant selected the PG&E Gates Substation as a potentially suitable substation for interconnection in Fresno County.

The Applicant set a search radius of up to 4 miles around the PG&E Gates Substation. Beyond this distance, the high cost of construction of the gen-tie line between the solar facility and the substation would make the Project economically infeasible. The search demonstrated that most of the lands within 4 miles of the PG&E Gates Substation are under a Williamson Act contract. The search concluded that there is no proximate noncontracted land, which is both available and suitable for the proposed use of the contracted land, and that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

Conflict with Williamson Act Contracted Land

The Project would not result in indirect impacts to adjacent agricultural lands that could occur with the conversion of the Project Area from agricultural uses to non-agricultural uses. This type of impact typically results from compatibility issues with adjacent agricultural land that is still in production. Such

compatibility issues may include nuisance effects to a site from noise, dust, odors, and drift of agricultural chemicals. Incompatible adjacent agricultural lands could experience restrictions on the use of agricultural chemicals, complaints regarding noise and dust, and vandalism and pilfering of crops. These conflicts could potentially result in increased costs to the agricultural operation and encourage conversion of additional agricultural lands to urban uses. The Project would not result in this type of indirect impact because operation and maintenance activities associated with solar facilities are minimal. Once constructed, the Project would be operated remotely 7 days per week and 365 days per year. The Project would be outfitted with a suite of sensors, monitoring equipment, and communications gear as part of the Project's Supervisory Control and Data Acquisition System. Onsite operations and maintenance activities would consist of responding to abnormal operating conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance (i.e., vegetation control). These activities are anticipated to require site visits on the order of once to twice per month, consisting of a small ground crew. The Project would be compatible with and is not expected to affect the agricultural use of the adjacent parcels. The Project does not involve residential or commercial development and is not expected to indirectly encourage such development. The operation of the Project would not result in an increase in employment that would require the construction of new housing. The cancellation of the Williams Act Contract would not likely result in the removal of adjacent lands from agricultural use.

Furthermore, the percentage of land proposed for this cancellation represents a small percentage of the remaining acreage under Williamson Act contracts in California and does not present a threat to the short- or long-term agricultural production in the State. As of 2021, the total acreage of contracted Williamson Act land in California was approximately 10 million acres (DOC 2022). As of 2016, approximately 1,421,579 acres—or about 39 percent of the County's assessed agricultural land—was under some form of Williamson Act contract with Fresno County (Fresno County 2023b). The Project Area represents approximately 0.0001 percent of the State acreage and only around 0.0007 percent of the contracted area in Fresno County.

Project Benefits

The County may exempt discretionary land use projects from agricultural mitigation requirements if it finds that the loss of agricultural land caused by the proposed conversion would be outweighed by specific overriding economic, legal, social, technological, or other benefits of the conversion (PRC Section 21081[b]).

Economic Benefits and Productive Use of County Land

The Project Area landowners are providers of jobs and economic activity in Fresno County who intend to stay in the agriculture business for the foreseeable future. Converting a portion of the land holdings to a solar energy use would provide the landowners with a stable revenue stream that would support the remainder of their existing agricultural operations.

The construction cost of the Proposed Project would likely exceed 175 million dollars, bringing an influx of construction jobs and indirect and induced economic benefits to the County. San Luis West Solar, LLC would make all reasonable efforts to establish a point of sale in Fresno County for equipment and construction related items and/or purchase products and equipment from local (Fresno County)

manufacturing facilities and/or vendors. San Luis West Solar, LLC would also make all reasonable efforts to conduct local recruitment efforts and/or coordinate with employment agencies in an attempt to hire from the local workforce. Removal of the acreage from the Williamson Act and conversion of the Project Area to solar would generate sales tax revenue and result in an increase in property tax revenue to the County.

Climate Change, Greenhouse Gases, and Renewable Energy

The Proposed Project would produce up to 125 Megawatts (MW) of clean, renewable electricity and provide up to 30 MW of energy storage, which would contribute to California's Senate Bill 100 goal of providing electricity that is 100 percent greenhouse-gas-emissions free by 2045. The development of the Proposed Project would address the public's concerns regarding energy security, global climate change, and the economy.

Agriculturally Compatible Use

The Proposed Project would be considered a compatible zoning use because the County permits utility-scale solar energy uses within zones AE-20 and AE-40 with an Unclassified CUP. The proposed solar energy facilities are therefore considered to be a compatible use. Consistent with Fresno County Solar Facility Guidelines, solar energy facilities would eventually be removed, and the land returned to agricultural capability. The cancellation of the Williams Act contract for most of the Project Area parcels would not likely cause conflict with adjacent Williamson Act contracted land or result in the removal of adjacent lands from agricultural use.

Operation of the Project would not affect adjacent properties under Williamson Act land use contracts. The Project would not result in indirect impacts to adjacent agricultural lands that could occur with the conversion of the Project Area from agricultural uses to non-agricultural uses. Operation and maintenance activities associated with solar facilities are minimal. Once constructed, the Project would be operated remotely, seven days per week and 365 days per year. Site visits for routine maintenance would be required on the order of once to twice per month, consisting of a small ground crew. Operation of the Project would not result in an increase in employment that would require the construction of new housing, and, therefore, is not expected to encourage urban development. The Project would be compatible with the surrounding agricultural uses and is not expected to affect the agricultural use of the adjacent parcels.

As noted above, approval of the Petition for Cancellation would be required prior to development of the Project and the determination by the Fresno County Board of Supervisors that cancellation of the contract is to the public benefit (per Government Code §51282[a]) has yet to be made. In the absence of the determination that cancellation of Project Williamson Act contracts is to the public benefit (per Government Code §51282[a]), this is considered a potentially significant impact requiring mitigation. Impacts to potential conflicts with Project parcels under Williamson Act contracts would be reduced to less than significant with implementation of Mitigation Measure AG-1 which would require the payment of fees to be used for such purposes as the stewardship, preservation, and enhancement of agricultural lands within Fresno County.

Threshold 3: Would the project 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 Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?

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, which 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. Commercial species shall be determined by the board on a district basis.

PRC Section 51104(g) defines *timberland zoned Timberland Production* as:

> ...an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision h.

The Project Area is located within the AE-20 and AE-40 zones. The Project Area does not contain land defined as forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]); therefore, no impact would occur.

Threshold 4: Would the project result in loss of forest land or conversion of forest land to non-forest use?

The Project Area does not contain land defined as forest land; therefore, the Project would not result in a loss of forest land or conversion of forest land to non-forest use, and no impact would occur.

Threshold 5: Would the project 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?

The Project Area is designated as Agriculture in the County's General Plan, is located within the AE-20 and AE-40 zones, and contains approximately 1,091 acres of Prime Farmland. The Project parcels are subject to Williamson Act contracts that the landowners would petition to cancel as part of the Project. The Project Area has a historical agriculture use; thus, the conversion of Prime Farmland and cancellation of the Williamson Act status of the Project parcels would directly result in decreased agricultural production within the Project Area.

The Project Area is located within the AE-20 and AE-40 zones, which permit utility-scale solar energy uses with an Unclassified CUP; therefore, the proposed solar energy facilities would be considered a compatible use. Construction and operation of the Project would take the approximately 1,100-acre Project Area out of production for at least 35 years; however, at the end of the Project's useful life, the Project would be decommissioned, and site restoration would take place following the Project's Reclamation Plan (Tetra Tech 2024a). Site reclamation would include the following steps:

- All above- and below-ground equipment, cabling, posts, and foundations would be dismantled and removed.
- Onsite roads would remain in place to accomplish reclamation. At the time of reclamation, if the landowner determines that some of these roads would be beneficial for future use of the site, those roads may remain after reclamation. Roads that would not be reused would be restored to pre-construction conditions.
- If soils are significantly compacted, they would be restored using a disking method. The ground surface would be restored and revegetated to pre-construction conditions.
- Solar panels and other equipment removed during the decommissioning process would be reused or recycled as appropriate.

Site restoration would restore the natural topography, vegetative cover, and hydrologic function of the Project Area to a condition as close as possible to pre-development conditions so that the site could be returned to agricultural capability; as such, the Project would not affect the long-term suitability of the Project Area for agricultural use.

The Project would also develop a Pest Management Plan to ensure that the Project Area does not harbor pests or vectors that could interfere with the surrounding agricultural uses (Appendix E; Tetra Tech 2024b). Implementing good-neighbor practices would ensure that the public benefits from the Project would not be eroded by unintended negative consequences. The Applicant would implement practices that would effectively manage weeds and pest populations while minimizing adverse environmental impacts to the greatest extent possible.

The Project would implement the following additional protective measures to ensure compatibility with surrounding agricultural uses:

- The Project would be buffered on all sides by a minimum of 50 feet.
- The solar array perimeter would be bordered by a 6- to 8-foot-tall chain link fence with barbed wire or ranch style fence with no barbed wire. This type of fence would provide necessary security for the Project while also being wildlife-friendly. A locked security gate would be located at the entrance to the Project Area.
- The Project would be developed to ensure there would be no net increase in offsite drainage flows, including peak flows during a storm event.

In addition, the Applicant would comply with County requirements associated with the County's Right-to-Farm ordinance. The Applicant would work cooperatively with farming operations in the vicinity of the Project Area to ensure that the Project would be a compatible use within the surrounding agricultural landscape.

For the reasons discussed above, Project impacts involving 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 would be less than significant.

3.2.5 Mitigation Measures

AG-1: **Payment of Agricultural In-Lieu Mitigation Fee.** The Applicant shall pay an "Agricultural In-Lieu Mitigation Fee" in the amount of 30 percent of the fair market value per acre for the total acres of the proposed site based on five comparable sales of land used for agricultural purposes as of the effective date of the permit, including program costs on a cost recovery/time and material basis. The Agricultural In-Lieu Mitigation Fee, shall be placed in a trust account administered by the Fresno County Agricultural Commissioner's office and shall be used for such purposes as the acquisition, stewardship, preservation and enhancement of agricultural lands within Fresno County. Level of Significance after Mitigation

3.2.6 Level of Significance After Mitigation

Project-related impacts to Agriculture and Forestry Resources would be less than significant with implementation of Mitigation Measure AG-1.

3.3 Air Quality

3.3.1 Introduction

This section describes the existing conditions and applicable laws and regulations for air quality and health risk. The section also discusses the Proposed Project's potential to increase air emissions in the region. Impacts to air quality are considered significant if the Proposed Project would (1) conflict with or obstruct implementation of the applicable air quality plan; (2) 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; (3) expose sensitive receptors to substantial pollutant concentrations; or (4) result in other emissions adversely affecting a substantial number of people.

The analysis is based on the following technical document included as an appendix:

- Air Quality and Greenhouse Gas Technical Report, San Luis West Solar Project (Tetra Tech 2025c; Appendix F).

3.3.2 Environmental Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below along with the current regulatory structure that applies to the San Joaquin Valley Air Basin (SJVAB), which encompasses the Project Area, pursuant to the regulatory authority of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

3.3.2.1 San Joaquin Valley Air Basin

Project Area is located in an unincorporated area of southern Fresno County. This region is within the SJVAB. The SJVAB is approximately 250 miles long and 35 miles in width (on average) and is bordered by the San Francisco Bay to the north, the Sierra Nevada mountains to the east, the Tehachapi Mountains to the south, and the Coast Range Mountains to the west. The bowl-shaped topography inhibits the movement of pollutants out of the Central Valley (SJVAPCD 2015a).

The SJVAB is in a Mediterranean Climate Zone, characterized by hot and dry summers with maximum temperatures that often exceed 100 degrees Fahrenheit, and winters with sparse rainfall. High pressure events can lead to temperature inversions, inhibiting vertical mixing and trapping air pollutants. Winds in the San Joaquin Valley typically blow from the northwest during summers toward the southeastern end of the San Joaquin Valley. The Coastal Range and the Sierra Nevada range restrict air movement to the west and east, respectively. During winter, weak winds can lead to limited transport of pollutants (Tetra Tech 2025c).

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the San Joaquin Valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet). Winter-time high-pressure events can often last many weeks with surface

temperatures often lowering into the 30s-degree Fahrenheit. During these events, fog can be present, and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD 2015a).

3.3.2.2 Criteria Air Pollutants

Criteria air pollutants are pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), and sulfur dioxide (SO_2) are local pollutants because they tend to accumulate in the air locally. Particulate matter (PM) is also considered a local pollutant in certain scenarios. The region is designated as a nonattainment area for the federal ozone standard and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ (California Air Resources Board [CARB] 2023). Health effects commonly associated with criteria pollutants are summarized in Table 3.3-1.

Table 3.3-1. Summary of Criteria Air Pollutants Sources and Effects

Pollutant	Major Manufactured Sources	Human Health and Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_x	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROG) and nitrous oxides in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
$PM_{2.5}$ & PM_{10}	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.

Source: California Air Pollution Control Offices Association 2013

Carbon Monoxide

Carbon Monoxide, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO is a byproduct of motor vehicle exhaust, which contributes more than 66 percent of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. CO concentrations can vary greatly over comparatively short distances. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source (i.e., up to 600 feet or 185 meters). Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO. High CO concentrations develop primarily during winter, when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators.

CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. Exposure to CO can cause chest pain in heart patients, headaches, and reduced mental alertness. High CO concentrations can aggravate cardiovascular disease and impair central nervous system functions. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and, with prolonged enclosed exposure, death.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides. Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and nitrogen dioxide (NO_2), attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_x concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

Ozone is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) also known as reactive organic gases (ROGs0 and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned

hydrocarbons in motor vehicle and other internal combustion engine exhaust. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

Particulate matter includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x), and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

In the western U.S., there are sources of PM_{10} in both urban and rural areas. PM_{10} and $PM_{2.5}$ are emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. Because particles originate from a variety of sources, their chemical and physical compositions vary widely.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly, may suffer worse illnesses; people with bronchitis can expect aggravated symptoms and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

Sulfur Dioxide

Main sources of sulfur dioxide (SO_2) are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and

lungs and can cause acute respiratory symptoms and diminished ventilator function in children. It can also yellow plant leaves and erode iron and steel. Other health effects that have been associated with longer-term exposures to high concentrations of SO_2, in conjunction with high levels of particulate matter, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. It is also a major precursor to $PM_{2.5}$, which is a significant health concern and a main contributor to poor visibility.

Lead

Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

3.3.2.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis. Carcinogenic TACs can also have noncarcinogenic health hazard levels.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, the State identified DPM as a TAC based on its potential to cause cancer, birth defects, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children, whose lungs are still developing, and the elderly, who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. Public exposure to TACs can result from

emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions.

3.3.2.4 Diesel Exhaust

As noted above, CARB identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (i.e., heavy-duty, light-duty), engine operating conditions (i.e., idle, accelerate, decelerate), fuel formulations (i.e., high/low sulfur fuel), and the year of the manufacture of the engine. More than 90 percent of DPM is less than 1 µm in diameter (about 1/70 the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2024a). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

3.3.2.5 Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or *hot spots*, are typically associated with intersections that are projected to operate at unacceptable levels of service (LOS) during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years.

3.3.2.6 Valley Fever

Coccidioidomycosis, often referred to as San Joaquin Valley Fever or Valley Fever, is an infection caused by inhalation of *Coccidioides immitis* (*C. immitis* or CI) fungus spores. The fungus grows in the soil in areas of California and the southwestern United States. It is prevalent in the San Joaquin Valley and particularly during conditions of high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. Fungus spores lie dormant in the soil until they are disturbed by wind, vehicles, or other ground-disturbing activities and become airborne. This disease affects both humans and animals. Agricultural workers, construction workers, and other people who are exposed to wind and dust outdoors are most prone to contracting Valley Fever. Approximately 60 percent of people with Valley Fever experience mild, flu-like symptoms or no symptoms at all. Mild symptoms include such as fever, cough, chest pain, muscle

or joint aches, night sweats, and rash. Rarely, in more serious cases, it can infect the brain, joints, bone, skin or other organs, or cause death.

In California, the number of reported Valley Fever cases has greatly increased in recent years with the number of cases tripling from 2015 to 2019. Although Fresno County has seen a decrease in reported Valley Fever cases in recent years, it remains a hot spot for infections, ranking in the top five California counties for disease incidents. There were 469 cases of Valley Fever reported in Fresno County in 2022. Valley Fever is not contagious and, therefore cannot be passed on from person to person. Most of those who are infected would recover without treatment within 6 months and would have life-long immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used.

3.3.2.7 Ambient Air Quality

CARB has established and maintains a network of sampling stations (called the State and Local Air Monitoring Stations network) that work in conjunction with local air pollution control districts and air quality management districts to monitor ambient pollutant levels. Air quality data statistics from the Tranquility, Parlier, Fresno-Garland, Fresno-Drummond and Fresno Foundry ambient air monitoring stations were used as representative of the air quality in the immediate vicinity of the Project Area. For O_3 and $PM_{2.5}$, the closest monitor is the Tranquility monitoring station located approximately 37 miles north of the Project Area. For NO_2, the closest monitor is the Parlier monitoring station located approximately 45 miles northeast of the Project Area. For PM_{10}, the closest monitor is the Fresno-Drummond monitoring station located approximately 43 miles northeast of the Project Area. For CO, the Fresno Foundry monitoring station is the closest, located approximately 44 miles northeast of the Project Area. Finally, for SO_2, the closest monitor is the Fresno-Garland monitoring station located approximately 48 miles northeast of the Project Area. Table 3.3-2 summarizes the ambient monitoring data obtained for 2020 through 2022.

Table 3.3-2. Summary of Ambient Air Quality Data

Pollutant Scenario	2020	2021	2022
O_3 – Tranquility			
Max 1-hour concentration (ppm)	0.087	0.087	0.087
Number of days exceeding CAAQS (0.09 ppm)	0	0	0
Max 8-hour concentration (ppm)	0.079	0.079	0.079
Number of days exceeding CAAQS (0.070 ppm)	3	3	3
Number of days exceeding NAAQS (0.070 ppm)	5	5	5
NO_2 – Parlier			
Max 1-hour concentration (ppb)	37.0	37.0	37.0
Number of days exceeding CAAQS (180 ppb)	0	0	0

Table 3.3-2. Summary of Ambient Air Quality Data			
Pollutant Scenario	**2020**	**2021**	**2022**
Number of days exceeding NAAQS (100 ppb)	0	0	0
Annual Average (53 ppb)	7	6	7
CO – Fresno-Foundry			
Max 1-hour concentration (ppb)	2.3	2.3	2.3
Number of days exceeding CAAQS (20 ppm)	0	0	0
Number of days exceeding NAAQS (35 ppm)	0	0	0
Max 8-hour concentration (ppm)	2.3	2.3	2.3
Number of days exceeding CAAQS (9.0 ppm)	0	0	0
Number of days exceeding NAAQS (9.0 ppm)	0	0	0
SO_2 – Fresno-Garland			
Max 1-hour concentration (ppb)	16.2	16.2	16.2
Number of days exceeding NAAQS (75 ppb)	0	0	0
Max 24-hour concentration (ppb)	2.2	2.2	2.2
Number of days exceeding CAAQS (40 ppb)	0	0	0
Annual Average (ppb) (30 ppb CAAQS)	0.44	0.44	0.44
$PM_{2.5}$ – Tranquility			
Max 24-hour concentration (µg/m^3)	146.2	146.2	146.2
Annual Average (µg/m^3) (12 µg/m^3 NAAQS)	11.6	9.0	–
Number of days exceeding NAAQS (35 µg/m^3)	21	7	0
PM_{10} – Fresno-Drummond			
Max 24-hour concentration (µg/m^3)	350.4	350.4	350.4
Number of days exceeding CAAQS (50 µg/m^3)	25	20	133
Number of days exceeding NAAQS (150 µg/m^3)	1	0	0
Annual Average (µg/m^3) (20 µg/m^3 CAAQS)	–	–	–

Notes: – = not available; µg/m^3 = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standards; CARB = California Air Resources Board; NAAQS = National Ambient Air Quality Standards; ppm = parts per million; ppb = parts per billion; USEPA = U.S. Environmental Protection Agency

Sources: CARB4b and USEPA 2024a; Tetra Tech 2025c; Appendix F

The USEPA and CARB designate air basins or portions of air basins and counties as being in *attainment* or *nonattainment* for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. Acceptable exceedances of the maximum value vary for the National Ambient Air Quality Standards (NAAQS) from fourth highest concentration for the 8-hour O_3 standard to 99th percentile to the SO_2 standard. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 2-year periods, depending on the pollutant. The California Ambient Air Quality Standards

(CAAQS) are not to be exceeded during a 3-year period. Table 3.3-3 presents both sets of ambient air quality standards (i.e., national and state) as well as attainment status for each of these standards within the SJVAB.

Table 3.3-3. Attainment Status of Criteria Pollutants in the San Joaquin Valley Air Basin

Pollutant	State Designation	Federal Designation
O_3 (1-hour)	Severe Nonattainment	No Federal Standard
O_3 (8-hour)	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; O_3 = ozone; $PM_{2.5}$ = Fine Particulate Matter; PM_{10} = Coarse Particulate Matter; SO_2 = sulfur dioxide

Source: Tetra Tech 2025c; Appendix F

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the 8-hour federal O_3 standard and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ (CARB 2023).

3.3.2.8 Sensitive Receptors

Sensitive receptors are segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems related to respiratory distress). Land uses often identified as sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. The greatest potential for exposure to air pollutants would occur during construction, when the ground would be disturbed from grading and delivery of materials. The construction emissions presented in this analysis are based on worst-case conditions, assuming maximum construction activity would occur simultaneously. In reality, exposure to emissions would vary substantially throughout construction, and would depend on the staging of the work being conducted over time, location of work relative to receptors, and weather conditions.

The Project is located on privately owned lands historically used for agriculture. Therefore, land use in the area is agricultural interspersed with sparse rural residential development. Several residences that are on

land not owned by the current property owner are located on West Jayne Avenue, with the closest being approximately 60 feet west of Assessor's Parcel Number (APN) 07808055 (Tetra Tech 2025c; Appendix F). Other residences in the Project vicinity include those belonging to the landowner, from whom the applicant will be purchasing the parcels should the Project proceed to construction. These are not considered to be sensitive receptors for the purpose of this analysis (Tetra Tech 2025c; Appendix F).

3.3.3 Regulatory Setting

3.3.3.1 Federal

Federal Clean Air Act

The federal Clean Air Act (CAA) (42 U.S. Code Sections 7401-7675) is a comprehensive federal law that regulates air emissions from area, stationary, and mobile sources and requires the adoption of the NAAQS to protect public health and welfare from the effects of air pollution. The federal CAA Amendments of 1990 required that the USEPA review all NAAQS with respect to health impacts and propose modifications or new rules as appropriate. In addition, the amendments of the 1990 federal CAA are associated with the attainment and maintenance of air quality standards, permits and enforcement, toxic air pollutants, acid deposition, stratospheric ozone protection, and motor vehicles and fuels.

NAAQS are currently assigned to SO_2, CO, NO_2, O_3, PM_{10}, $PM_{2.5}$, and lead. These pollutants are designated criteria pollutants.

Hazardous Air Pollutants

The 1977 federal CAA amendments required the USEPA to identify National Emission Standards for Hazardous Air Pollutants (HAPs) to protect public health and welfare. HAPs include certain volatile organic compounds, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. The 1990 federal CAA Amendments, which expanded the control program for HAPs, identified 189 substances and chemical families as HAPs. Over the years, the list has been modified. Currently, there are 187 federally regulated HAPs.

3.3.3.2 State

California Clean Air Act

The California Clean Air Act (CCAA) passed by the California Legislature and signed into law by the Governor in 1988, assigns state-specific ambient air quality standards which had originally been established in part in 1959 by the California Department of Public Health. The California standards are, in most cases, more stringent than federal standards. The goal of the CCAA is to attain state air quality standards by the earliest practical date. Because California established Ambient Air Quality Standards several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology in much of California, there can be a considerable difference between CAAQS and NAAQS.

The CCAA requires each air pollution control district of an air basin designated as nonattainment of state ambient air quality standards to prepare and submit a plan for attaining and maintaining state standards (specifically, an Air Quality Management Plan). After further review of the relationship between fine particulate matter and human health effects, the CARB adopted new state standards on June 20, 2002, for $PM_{2.5}$. No specific control programs are in place to achieve the more stringent standard. However, it does represent an air quality goal intended to dramatically reduce the adverse health effects from fine-particle air pollution.

California State Implementation Plan

The federal CAA requires all states to submit a State Implementation Plan (SIP) to USEPA. SIPs are not single documents; they are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls. Many of California's SIPs and attainment plans rely on the same core set of control strategies described above, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law designates CARB as the lead agency for all purposes related to SIPs and attainment plans. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards those revisions to USEPA for approval and publication in the Federal Register.

The law also requires submission of attainment plans for areas that are designated nonattainment with respect to the NAAQS. These attainment plans are comprehensive plans that describe how a federal nonattainment area will attain and maintain the particular NAAQS standard(s) to which it does not conform. Once the area is redesignated as attainment for the NAAQS in question, a maintenance area classification is required for a period of 20 years to provide assurance the area will continue to be in attainment, and SIPs must be submitted under this maintenance area classification.

Tanner Air Toxics Act & Air Toxics "Hot Spot" Information and Assessment Act

The state Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California TACs list identifies more than 700 pollutants, of which carcinogenic and on carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the federal HAPs. The Air Toxics *Hot Spots* Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources. TAC emissions from individual facilities are quantified and prioritized. *High-priority* facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, facilities are required to communicate the results to the public in the form of notices and public meetings.

DPM, a mixture of solid particles in diesel engine exhaust, is classified as a carcinogen and TAC in California. Long-term exposure to DPM poses the highest cancer risk of any TAC evaluated by Office of Environmental Health Hazard Assessment (OEHHA). CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from DPM. Exposure to DPM is highest near roads and freeways, truck loading and unloading operations, and diesel-powered machinery operations. Exposure to diesel exhaust in general can have immediate health effects such as

irritation to the eyes, nose, throat, and lungs. It can also cause coughs, headaches, light-headedness, and nausea (Tetra Tech 2025c; Appendix F).

In 2000, CARB approved a comprehensive *Diesel Risk Reduction Plan* to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. In 2020, CARB adopted the Advanced Clean Truck Regulations that requires truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California will be zero-emission.

Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, On-Road Heavy Duty (New) Vehicle Program, In-Use Off-Road Diesel Vehicle Regulation, and New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Several Airborne Toxic Control Measures reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 California Code of Regulations [CCR] 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

Assembly Bill 203 California Labor Code Section 6709

In 2019, Section 6709 was added to the AB 203 California Labor Code. This legislation requires employers to provide effective Valley Fever awareness and prevention training on an annual basis for all construction employees at risk of prolonged exposure to dust in Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura counties. Additionally, the training must be provided before an employee begins work that is reasonably anticipated to cause exposure due to substantial dust disturbance.

3.3.3.3 Local

San Joaquin Valley Air Pollution Control District

SJVAPCD attains and maintains air quality conditions in the SJVAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SJVAPCD includes preparation of plans for attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. SJVAPCD also inspects stationary sources of air pollution and responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA and CCAA.

The SJVAPCD has developed the following plans to attain and maintain the state and federal standards:

- *1-Hour Ozone*. The SJVAPCD adopted the *Extreme Ozone Attainment Plan* in October 2004 to address USEPA's 1-hour Ozone standard. The plan contained emission reductions and a timeline for attaining the federal 1-hour ozone ambient air quality standards in the SJVAB by November 15, 2010. Although the USEPA revoked the 1-hour ozone standard in 2005, the SJVAB

was required to demonstrate that this standard had been met. Following this, the SJVAPCD adopted the 2013 Plan for the Revoked 1-Hour Ozone Standard to attain the 1-Hour Ozone Standard by 2017. In 2015, the district submitted an Attainment Determination Request to the USEPA based on 2012-2014 Ozone data. On July 18, 2016 (81 FR 46609), USEPA determined that the SJVAB had achieved the 1-hour ozone NAAQS. On June 15, 2023, the SJVAPCD adopted the *2023 Maintenance Plan and Redesignation Request for the Revoked 1-Hour Ozone Standard,* which includes a demonstration that would ensure the area remains in attainment of the 1-hour ozone NAAQS through 2036 (Tetra Tech 2025c; Appendix F).

- *8-Hour Ozone*. The USEPA promulgated 8-hour ozone NAAQS in 1997, 2008, and 2015, with each successive rule promulgating more stringent NAAQS. The SJVAPCD has been required to develop plans for each of the NAAQS. The SJVAPCD developed the 2016 Ozone Plan to address USEPA's 2008 8-hour ozone standard, which the air basin must attain by 2032. While substantial progress has been made to improve air quality in the SJVAB through the implementation of existing plans and clean air investments by businesses and residents, the SJVAB continues to experience unique and significant air quality challenges in attaining the increasingly stringent NAAQS. The SJVAB is classified as an *extreme* nonattainment area for the 2015 ozone standard. On June 18, 2020, the SJVAPCD published the *2020 Reasonably Available Control Technology Demonstration* for the 2015 8-Hour Ozone Standard. The 2022 attainment plan for the 2015 8-hour ozone standard was adopted in December 2022. SJVAPCD's current regulations reflect technologies and methods that are beyond control levels established under the CAA. The control strategy included in the 2022 Ozone Plan will reduce NO_x emissions by 72 percent between 2018 and 2037, which will help the Valley's progress toward attaining the 2015 8-hour ozone standard. The SJVAPCD and state's incentive programs will also reduce emissions from mobile sources in the coming years. The 2022 Plan for the 2015 8-hour Ozone Standard demonstrates that reductions being achieved will ensure expeditious attainment of the 2015 8-hour ozone standard by the 2037 attainment deadline (Tetra Tech 2025c; Appendix F).

- *PM_{10}*. The SJVAPCD adopted the *2007 PM_{10} Maintenance Plan and Request for Redesignation*, which demonstrated that the SJVAB has attained and will continue to attain the PM_{10} standard. USEPA approved the document in 2008 and SJVAB was redesignated to attainment/maintenance.

- *$PM_{2.5}$*. The SJVAPCD's 2008 $PM_{2.5}$ Plan demonstrated attainment of the 1997 $PM_{2.5}$ standard in 2014. USEPA subsequently promulgated increasingly more stringent NAAQS in 2006, 2012, and 2024. The SJVAPCD's *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards* sets an attainment deadline of 2024. This plan was approved by USEPA on June 30, 2020. Due to the SJVAB's designation as nonattainment with respect to the 2012 NAAQS, the area is likely to be designated nonattainment with respect to the 2024 NAAQS. The promulgation of the 2024 NAAQS will eventually require a plan to be developed, but the federal CAA first requires USEPA to designate the attainment status within 2 years (i.e., by May 2026). CARB must submit the attainment plan within 18 months of the effective designation date (i.e., no later than November 2027, but could be earlier depending on how quickly the nonattainment designations are promulgated)

The SJVAPCD's primary means of implementing air quality plans is by adopting and enforcing rules and regulations. Stationary sources within the jurisdiction are regulated by the SJVAPCD's permit authority and through its review and planning activities. Unlike stationary source projects, which encompass very specific types of equipment, process parameters, throughputs, and controls, air emissions sources from land use development projects are primarily mobile sources (i.e., construction equipment and motor vehicles) and area sources (small dispersed stationary and other non-mobile sources), including exempt sources (i.e., no permit required) such as consumer products, landscaping equipment, furnaces, and water heaters. Mixed-use land development projects may include nonexempt sources, including devices such as stationary internal combustion engines i.e., backup power generators), small to large boilers, gas stations, or asphalt batch plants.

Notwithstanding nonexempt stationary sources, which would be permitted on a case-by-case basis, the following SJVAPCD regulations generally apply to land use development projects:

Regulation IV- Prohibitions

- *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 3 minutes in any 1 hour, which is (SJVAPCD 2005):
  - As darker or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States 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 (SJVAPCD 1992).

Regulation VIII - Fugitive PM_{10} Prohibition.

- *Rules 8011–8081.* Designed to reduce PM_{10} emissions (predominantly dust and dirt) generated by human activity, including construction and demolition, road construction, bulk materials storage, use of paved and unpaved roads, and carryout and trackout.
- *Rule 8021 – Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities.* The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities. This rule applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site. This rule also applies to the construction of new landfill disposal sites or modification to existing landfill disposal sites prior to commencement of landfilling activities (SJVAPCD 2004).

Pursuant to Rule 8021 Section 6.3, the Project would be required to develop, prepare, submit, obtain approval of, and implement a Dust Control Plan, which would reduce fugitive dust impacts to less than significance thresholds for all construction phases of the Project. Table 8021-1 provides control measure options for construction, excavation, extraction, and other earth moving activities.

Regulation IX - Mobile and Indirect Sources.

- *Rule 9510- Indirect Source Review (ISR).* The ISR rule went into effect March 1, 2006, and requires developers of new residential, commercial, and some industrial projects to reduce NO_X and PM_{10} emissions generated by their projects. Section 6.0 of the ISR rule outlines general mitigation requirements for developments that include reduction in construction emissions of 20 percent of the total construction NO_X emissions, and 45 percent of the total construction PM_{10} emissions. The rule also requires a project to reduce operational NO_X emissions by 33.3 percent and operational PM_{10} emissions by 50 percent, over a period of 10 years. Section 7.0 of the ISR rule includes fee schedules for construction or operational excess emissions of NO_X or PM_{10} if those emissions are above the goals identified in Section 6.0 of the rule. Monies collected from this fee are used by the SJVAPCD to fund emission reduction projects in the SJVAB on behalf of the project.
- *Rule 9610- State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs.* Rule 9610 provides an administrative mechanism for the SJVAPCD to receive credit towards California SIP requirements for emission reductions achieved in the SJVAB through incentive programs administered by the SJVAPCD, USDA's Natural Resources Conservation Service, or CARB. On April 9, 2015, USEPA finalized a limited approval and limited disapproval (for a minor administrative error) of Rule 9610 as a revision to the California SIP. Additional documentation regarding the effectiveness of the SJVAPCD's incentive programs can be found in the 2015 Annual Demonstration Report SIP Credit for Emission Reductions Generated Through Incentive Programs (SJVAPCD 2015b).

Fresno County General Plan

Construction and operation of the solar facility would be subject to policies and regulations contained within the *Fresno County General Plan* (Fresno County 2024). The Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the proposed Project. Applicable policies are as follows:

- *Goal OS-G.* To improve air quality and minimize the adverse effects of air pollution in Fresno County.
    - *Policy OS-G.1: Air Quality Evaluation.* 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 SJVAPCD and the cities in Fresno County.

- *Policy OS-G.2: Air Quality Impact Assessment.* The County shall ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. The County shall require projects to comply with the County's adopted air quality impact assessment and mitigation procedures.
- *Policy OS-G.4: Air Quality Impact Coordination.* The County shall consult with the SJVAPCD during CEQA review for projects that require air quality impact analysis and ensure that the SJVAPCD is on the distribution list for all CEQA documents.
- *Policy OS-G.13: Valley Fever Mitigation.* The County shall continue to promote public awareness of Valley Fever risks relating to ground disturbing activities through the provision of educational materials, webpages and resource contact information. For projects involving ground disturbance on unpaved areas left undisturbed for 6 months or more, the County shall require developers to provide project-specific Valley Fever training and training materials.
- *Policy OS-G.14: Fugitive Dust Control Measures.* 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 PM_{10} regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.
- *Policy OS-G.15: Access Road Standards.* The County shall require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.

3.3.4 Impacts Analysis

3.3.4.1 Methodology

Project emissions were estimated using the emission calculation tool California Emissions Estimator Model (CalEEMod) (Version 2022.1.1.21). The model contains region-specific data and quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as greenhouse gas emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. For calculation of on-road (offsite) mobile sources, CalEEMod uses the EMFAC2021 emissions factors.

Construction and operation of the Project would generate air contaminant emissions, including ROGs, NOx, PM_{10}, $PM_{2.5}$, CO, and SO_2. The Project would also result in TAC emissions, such as DPM and odors. The methods and tools used to estimate emissions from the Project are described in the following subsections.

Construction Emissions

Short-term air pollutant emissions associated with the Project would be generated from construction-related activities, including equipment exhaust, vehicle travel on paved and unpaved roads, and fugitive

dust from soil disturbance activities. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Project Proponent.

During construction of the Project, water would be required for common construction-related purposes, including (but not necessarily limited to) dust suppression, soil compaction, and grading. Water for dust control may be used for ingress and egress of onsite construction vehicle equipment traffic and for the construction of the solar equipment. Approximately 120 acre-feet of water is estimated to be used for dust control. Fugitive dust emissions from earth movement (e.g., site clearing and preparation) were quantified using emission factors from CalEEMod. The graded acreage was assumed to be equal to the total Project Area.

Operation Emissions

Once constructed, the Project would operate 7 days per week, 365 days per year. Operational emissions were estimated using CalEEMod to include area, energy, and mobile source emissions. Operational assumptions, including equipment, solid waste, and water usage were based on information provided by the Project proponent. Based on conservative estimates, the Project is anticipated to have up to 50 round trips per year, accounting for regular operation and maintenance activities of two full-time-equivalent staff visiting the site up to two times annually.

No water would be used during the operation of the Project, except for annual panel washing, which is estimated to be less than 1 acre-foot of water usage per year.

An emergency generator may be installed for use in the event that the regional transmission system fails. If deemed necessary, the generator would likely be installed at the Project substation. This emergency generator would provide emergency power until the regional transmission system restores operation. The generator would be powered by propane or diesel fuel and is estimated to be 49 kilowatts or less in size. This analysis includes an emergency generator powered by diesel fuel with an annual operation of 50 hours.

3.3.4.2 Thresholds of Significance

California Environmental Quality Act Guidelines

According to Appendix G of the CEQA Guidelines, air quality impacts are considered significant if implementation of the Proposed Project would:

- conflict with or obstruct implementation of the applicable air quality plan;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- expose sensitive receptors to substantial pollutant concentrations; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

San Joaquin Valley Air Pollution Control District

SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI; SJVAPCD 2015a) includes one additional criterion as follows:

- Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Criteria Pollutants

The SJVAPCD adopted emissions-based thresholds of significance in the 2015 GAMAQI as shown in Table 3.3-4.

Table 3.3-4. SJVAPCD Air Quality Significance Thresholds – Criteria Pollutants (Tons per Year)

Air Pollutant	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
ROG	10	10	10
NO_x	10	10	10
CO	100	100	100
SO_x	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	10	10	10

Notes: CO = carbon monoxide; NO_x = nitrogen oxide; $PM_{2.5}$ = Fine Particulate Matter; PM_{10} = Coarse Particulate Matter; ROG = Reactive Organic Gas; SOx = sulfur oxides

Source: San Joaquin Valley Air Pollution Control District (SJVAPCD) 2015a

The SJVAPCD has also established screening criteria to determine whether a project would result in a CO hotspot at affected roadway intersections. If neither of the following criteria are met at any of the intersections affected by the Project, the Project would result in no potential to create a violation of the CO standard:

- A traffic study for the Project indicates that the level of service (LOS) on one or more streets or at one or more intersections in the Project vicinity will be reduced to LOS E or F.
- A traffic study indicates that the Project will substantially worsen an already existing LOS F on one or more streets or at more intersections in the Project vicinity.

Ambient Air Quality Analysis

The SJVAPCD recommends that an Ambient Air Quality Analysis (AAQA) be performed when onsite emissions of any criteria pollutant would equal or exceed 100 pounds per day. If emissions of one criteria pollutant exceeds the threshold, then all criteria pollutants are to be modeled. A project would be considered a significant impact if its emissions are predicted to cause or contribute to a violation of an

ambient air quality standard by exceeding any CAAQS or NAAQS. If an exceedance of the CAAQS or NAAQS is predicted, modeled concentrations may be compared to significant impact levels to assess whether a project's emissions would contribute significantly to an existing violation of the CAAQS or NAAQS.

Toxic Air Contaminants

The GAMAQI also provides significance thresholds for toxic air contaminants:

- Carcinogens: Maximally exposed individual risk equals or exceeds 20 in one million
- Non-Carcinogens, Acute: Hazard Index equals or exceeds 1 for the maximally exposed individual
- Non-Carcinogens, Chronic: Hazard Index equals or exceeds 1 for the maximally exposed individual

Odors

The GAMAQI also states that projects must be assessed for odor impacts on a case-by-case basis for the following two situations:

- Generators: Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate.
- Receivers: Residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

3.3.4.3 Impact Discussion

Threshold 1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

The Project would not conflict with existing land uses or result in population growth. The Project would not result in a long-term increase in the number of trips or increase the overall vehicle miles traveled in the area. Worker vehicle trips, vendor trucks, and haul trucks would be generated during the proposed construction activities but would cease after construction is completed. The SJVAPCD has determined that projects with emissions less than the thresholds of significance for criteria pollutants would not conflict or obstruct implementation of the SJVAPCD's air quality plan (SJVAPCD 2015a). As shown in Table 3.3-5 below, construction emissions would not exceed the SJVAPCD significance thresholds for any pollutants, both with and without reductions. Furthermore, the Project would comply with applicable SJVAPCD rules and regulations, such as Regulation VIII (Fugitive PM_{10} Prohibitions) and IX (Mobile and Indirect Sources) and SJVAPCD Rule 8021 to control dust emissions generated during grading activities.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, aims to fulfill the district's emission reduction commitments in the PM_{10} and Ozone Attainment Plans. Rule 9510 is intended to reduce emissions of NO_X and PM_{10} associated with construction and operation of new development projects in the San Joaquin Valley. Specifically, Rule 9510 was promulgated to reduce the growth in NO_X and PM_{10} emissions associated with new development projects, including transportation

and transit development projects in the San Joaquin Valley. This rule applies to the following projects within the jurisdiction of the SJVAPCD:

- 50 residential units
- 2,000 square feet of commercial space
- 25,000 square feet of light industrial space
- 100,000 square feet of heavy industrial space
- 20,000 square feet of medical office space
- 39,000 square feet of general office space
- 9,000 square feet of educational space
- 10,000 square feet of government space
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above.

This rule also applies to any transportation or transit project where emissions equal or exceed 2 tons of Nitrogen oxide (NO_x) or 2 tons of PM_{10}. The project developers are required to reduce concentrations of NO_x by 20 percent and PM_{10} by 45 percent during construction activities. The rule also requires the Project to reduce operational NO_X emissions by 33.3 percent and operational PM_{10} emissions by 50 percent over a period of 10 years. Development projects that have a mitigated baseline below 2 tons per year of NO_x and two tons per year of PM_{10} shall be exempt from the requirements per Rule 9510 (SJVAPCD 2017).

The rule requires at least 20 percent reduction of NO_X construction emissions and 45 percent of construction diesel exhaust particulate matter (expressed as PM_{10} exhaust), and assures that the Project will not interfere with SJVAPCD attainment plans. The most potent reduction measure feasible for the Project includes the requirement that during all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors over 50 horsepower must be CARB Tier 4 Certified as set forth in Section 2423 of Title 13 of the CCR, and Part 89 of Title 40 of the Code of Federal Regulations (CFR), as required by Mitigation Measure AQ-1. Table 3.3-5 provides NO_X and PM_{10} construction exhaust emissions with and without implementation of Mitigation Measure AQ-1.

Table 3.3-5. Rule 9501 NO_x and PM_{10}

Air Pollutant	Construction NO_x Emissions	Construction PM_{10} Exhaust Emissions
	Tons Per Year	
No Reductions	4.75	0.16
Rule 9510 Reductions	2.68	0.06

Table 3.3-5. Rule 9501 NO_x and PM_{10}		
Air Pollutant	**Construction NO_x Emissions**	**Construction PM_{10} Exhaust Emissions**
	Tons Per Year	
Percent Reduction	**43.58%**	**62.95%**
Required Reduction	*20%*	*45%*

Notes: NO_x = nitrogen oxide; PM_{10} = Coarse Particulate Matter

As shown, the emission reductions resulting from the use of Tier 4 engines in all construction equipment greater than 50 horsepower achieve Rule 9510 reduction requirements.

Due to the nature of the Project as a solar energy generator, it is not feasible to achieve Rule 9510 emission reduction requirements for operational emissions of NO_X and PM_{10}. A project that cannot achieve the Rule 9510 emission reduction requirements are typically required to pay the appropriate offsite fees, in accordance with the fee calculation procedures in section 7.0 of Rule 9510. However, as shown by Table 3.3-6 below, operational-generated emissions would not exceed SJVAPCD significance thresholds and additionally would produce operational emissions below 2 tons per year of NO_x and 2 tons per year of $PM_{10.}$ As previously described, development projects that have a mitigated baseline below 2 tons per year of NO_x and 2 tons per year of PM_{10} shall be exempt from the requirements per Rule 9510 (SJVAPCD 2017). Thus, the Project is exempt from Rule 9510 operational requirements.

In summary, the Project would result in emissions below SJVAPCD significance thresholds and would adhere to all applicable SJVAPCD rules and regulations. Furthermore, the Project consists of the construction of a solar energy generation facility. The Project would not result in population growth and would not cause an increase in currently established population projections. The Project does not include residential development or large local or regional employment centers, and thus would not result in significant population or employment growth. Furthermore, the operation of the Project would create renewable energy over its planned lifetime and decrease the need for energy from fossil fuel-based power plants in the state, which is considered a beneficial impact to statewide air quality. The energy produced by the Project would displace the criteria pollutant emissions which would otherwise be produced by existing business-as-usual power generation resources (including natural gas and coal). Additionally, once construction is complete, the Project would not generate quantifiable criteria emissions from Project operations.

Impacts would be less than significant with implementation of Mitigation Measure AQ-1.

Threshold 2: Would the project violate any air qulity standard or contribute substantially to an existing or projected air quality violation?

or

Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable.

Construction Emissions

As stated previously, the SJVAPCD has established annual significance thresholds to address pollution sources associated with general construction activities, such as the operation of onsite construction equipment, fugitive dust from site grading activities, and travel by construction workers. In addition to the SJVAPCD annual significance thresholds, the SJVAPCD also recommends the use of daily emissions thresholds for the evaluation of Project impacts on localized ambient air quality. Based on these recommended thresholds, the Proposed Project would result in a significant contribution to localized ambient air quality if onsite emissions would exceed a daily average of 100 pounds per day for any of the pollutants evaluated.

The Project would comply with SJVAPCD Rule 8021 to implement standard construction practices to reduce fugitive dust emissions. to control dust emissions generated during grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include:

- Develop a dust control plan to outline how the Project will comply with Rule 8021 and minimize fugitive dust during construction
- Land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled utilizing application of water or by presoaking
- Minimize and cleanup trackout onto paved roads
- Cover haul trucks
- Rapid cleanup of Project-related trackout or spills on paved roads
- Minimize grading and soil movement when winds exceed 30 miles per hour
- Implement a speed limit of 15 miles per hour during all construction phases for vehicles travelling on un-paved roads

The following measures were incorporated in CalEEMod to capture reductions in fugitive dust emissions:

- Watering of exposed surfaces up to 3 times per day
- Watering of unpaved construction roads up to 2 times per day
- Implementation of vehicle speed on unpaved roads (assumes a CalEEMod default speed of 25 miles per hour)

In addition to dust control measures, the use of Tier 4 engines was employed in CalEEMod for NO_x reduction. For the purpose of this assessment, it was assumed that all off-road diesel equipment greater than 50 horsepower would meet USEPA Tier 4 off-road emission standards or equivalent.

Table 3.3-6 presents the estimated maximum annual emissions and estimated onsite maximum daily emissions generated during construction of the Project. Emissions with and without Rule 9510 and dust control reductions are presented.

Table 3.3-6. Estimated Construction Criteria Air Pollutant Emissions

Total Project Emissions	Emissions					
	ROG	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Annual Emissions (tons per year)						
No Reductions	1.47	4.75	9.14	0.80	3.12	0.72
Rule 9510 and Dust Control Reductions	1.47	2.68	9.11	0.80	1.47	0.37
SJVAPCD Threshold (tons per year)	*10*	*10*	*100*	*27*	*15*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Daily Emissions (pounds per day)						
No Reductions	18.05	66.88	93.71	8.91	50.59	15.61
Rule 9510 and Dust Control Reductions	18.05	24.99	93.71	8.91	12.93	3.96
SJVAPCD Onsite Emissions Threshold (pounds per day)	*100*	*100*	*100*	*100*	*100*	*100*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: CO = carbon monoxide; NO_x = nitrogen oxide; $PM_{2.5}$ = Fine Particulate Matter; PM_{10} = Coarse Particulate Matter; ROG = Reactive Organic Gas; SO_x = sulfur oxides; SJVAPCD = San Juaquin Valley Air Pollution Control District

As shown, annual construction emissions would not exceed the SJVAPCD annual significance thresholds for any pollutants, both with and without reductions, nor would daily construction emissions.

The SJVAPCD recommends that an AAQA be performed when onsite emissions of any criteria pollutant would equal or exceed 100 pounds per day. If emissions of one criteria pollutant exceeds the threshold, then all criteria pollutants are to be modeled. A project would be considered a significant impact if its emissions are predicted to cause or contribute to a violation of an ambient air quality standard by exceeding any CAAQS or NAAQS. As shown in Table 3.3-6, the maximum daily onsite construction

emissions would not exceed SJVAPCD's localized significance threshold of 100 pounds per day for ROG, NO_X, CO, SO_x, PM_{10}, or $PM_{2.5}$ both with and without reductions. An AAQA was not conducted for the Project since there are no threshold exceedances. Impacts would be less than significant.

Operational Emissions

Once constructed, the Project would operate 7 days per week, 365 days per year. The Project will be outfitted with a suite of sensors, monitoring equipment, and communications gear, as part of the Project's Supervisory Control and Data Acquisition System. Onsite operational activities will consist of responding to abnormal operating conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance (i.e., vegetation control). Maintenance trucks would be utilized to perform routine maintenance.

Project operational emissions were estimated using CalEEMod to include mobile, area, stationary, and off-road source emissions. This includes potential emissions from worker commutes, and heavy trucks used during maintenance. Emissions from energy use were based on estimated requirements for lighting and Heating, ventilation, and air conditioning. Table 3.3-7 presents the estimated maximum annual operational emissions and maximum daily operational emissions with a comparison to SJVAPCD thresholds.

Table 3.3-7. Estimated Operation Criteria Air Pollutant Emissions

Total Project Emissions	Emissions					
	ROG	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Annual Emissions (tons per year)						
Area, Mobile, Stationary, and Off-road	0.08	0.35	0.41	0.002	0.02	0.01
SJVAPCD Threshold (tons per year)	*10*	*10*	*100*	*27*	*15*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Daily Emissions (pounds per day)						
Area, Mobile, Stationary, and Off-road	4.65	27.48	30.07	0.12	1.01	0.91
SJVAPCD Onsite Emissions Threshold (pounds per day)	*100*	*100*	*100*	*100*	*100*	*100*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: CO = carbon monoxide; NO_x = nitrogen oxide; $PM_{2.5}$ = Fine Particulate Matter; PM_{10} = Coarse Particulate Matter; ROG = Reactive Organic Gas; SO_x = sulfur oxides; SJVAPCD = San Joaquin Valley Air Pollution Control District

As shown in Table 3.3-7, operational emissions would not exceed the SJVAPCD thresholds for ROG, NO_X, CO, SO_x, PM_{10} and $PM_{2.5}$. Ambient air quality modeling was not required because operational activities would be minimal, including only routine inspection and maintenance. Additionally, traffic associated with operations would be negligible and would not result in CO hotspots at intersections.

Impacts would be less than significant.

Threshold 3: Would the project expose sensitive receptors to substantial pollutant concentrations?

The Project consists of construction of a Battery Energy Storage System facility that may have the potential to affect nearby sensitive receptors. The nearest rural residences on land not owned by the current property owner are located approximately 60 feet west of the Project boundary of APN 07808055. As described previously, construction and operation of the Project would not result in emissions of criteria pollutants in excess of established thresholds.

Toxic Air Contaminants

In addition to the significance thresholds for criteria pollutants, SJVAPCD has established significance thresholds for TAC emissions. The use of combustion equipment in Project construction activities could result in elevated concentrations of DPM, which could lead to an increase in cancer risk or chronic health impacts.

The greatest potential for exposure to DPM would occur during construction. The primary TAC from the Project is DPM from construction equipment. PM_{10} and $PM_{2.5}$ are surrogates for DPM. Table 3.3-6 provides a summary of total PM_{10} and $PM_{2.5}$ emissions during construction (including fugitive dust) on an annual and daily basis, respectively. Tables 3.3-7 provides a summary of total PM_{10} and $PM_{2.5}$ emissions during operation (including fugitive dust) on an annual and daily basis, respectively. Both construction and operational emissions of PM_{10} and $PM_{2.5}$ are a small fraction of the significance thresholds.

Because of the relatively small levels of DPM emissions during Project construction and operation, DPM emissions from Project construction would disperse to negligible levels. Therefore, the health impacts associated with exposure to DPM from either project construction or operation are not expected to be significant.

SJVAPCD also provides significance thresholds for TACs that expose sensitive receptors to substantial pollutant concentrations, including those resulting in:

- a cancer risk greater than or equal to 20 in a million; and/or
- a Hazard Index (non-cancerous) greater than or equal to 1.

Exposure to emissions would vary throughout construction and would depend on the staging of the work being conducted, location of work relative to receptors, and weather conditions.

A Health Risk Assessment (HRA) was not conducted for the Proposed Project due to the low level of emissions. However, the SJVAPCD's Prioritization Calculator was used to conduct a screening analysis. For risk assessment purposes, PM_{10} in diesel exhaust is considered DPM, originating mainly from off-road equipment during construction. As per the California Air Pollution Control Officers Association, a normalization factor is incorporated in the calculation of the prioritization results to provide a conservative risk evaluation. The updated normalization factors based on the 2015 OEHHA guidance is based on the 70-year cancer risk scenario (Tetra Tech 2025c; Appendix F). As stated previously,

construction activities will be limited to a duration of 11 months. Therefore, the temporary nature of the generated construction emissions was accounted for in the prioritization calculation, resulting in a maximum score of 3.81 (Tetra Tech 2025c; Appendix F).

Additionally, since the Project parcels are spread out, it can be stated that the estimated score for the receptor adjacent to APN 07808055 on West Jayne Avenue will likely be lower based on emissions contained within the parcel. Therefore, impact would be less than significant.

Because operational activities would be limited to routine inspection and maintenance, an operational HRA was not required.

Impacts would be less than significant.

Threshold 4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During Project-related construction activities, various diesel-powered vehicles and equipment could create minor odors. These odors are not likely to be noticeable beyond the immediate vicinity and would be temporary and short-lived. Therefore, construction odor impacts would be less than significant. Long-term odors are associated typically with industrial projects involving use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes. Odors also are associated with such uses as sewage treatment facilities and landfills. The Project does not include any uses identified as being associated with odors. Therefore, no long-term odor impacts would occur during Project operations.

According to the California Department of Public Health, incidences of Valley Fever have been consistently high in the Southern San Joaquin Valley and Central Coast regions. The Northern San Joaquin Valley has shown a large increase in cases between 2000 and 2018; the highest median annual incidences were in the Southern San Joaquin Valley (90.6 per 100,000), Central Coast (9.7 per 100,000), and Northern San Joaquin Valley (5.6 per 100,000) (Tetra Tech 2025e).

There are currently no recommended thresholds of significance for Valley Fever. Construction activities, including site preparation and grading, would have the potential to make CI fungus spores airborne. However, the Project would comply with SJVAPCD Rule 8021 to control dust emissions generated during grading activities. The Project would also comply with SJVAPCD Regulation VIII, which requires fugitive dust sources to implement best available control measures for all sources.

The California Department of Public Health recommends that employers in areas with endemic *C. immitis* should implement infection prevention measures and protect workers who are at risk for exposure to *C. immitis*. Infection risk can be decreased by using dust-control measures and appropriate personal protective equipment at work. The Project would implement dust control strategies to limit fugitive dust leaving the site and will also implement Valley Fever awareness and training.

Impacts would be less than significant.

3.3.5 Mitigation Measures

AQ-1: During all construction activities, all diesel-fueled construction equipment greater than 50 horsepower including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be California Air Resources Board (CARB) Tier 4 Certified as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.

3.3.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.4 Biological Resources

3.4.1 Introduction

This section describes the existing conditions and applicable laws, regulations, and policies for biological resources. The section also analyzes the Proposed Project's potential to affect biological resources during construction and operation. Impacts to biological resources are considered significant if the Proposed Project would:

(1) have a substantial adverse effect on candidate, sensitive, or special-status species;

(2) have a substantial adverse effect on riparian habitat or other sensitive natural community;

(3) result in substantial interference with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites; or

(4) conflict with applicable local policies or ordinances protecting biological resources or with the provisions of an applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The analysis is based on the following technical documents:

- Biological Resources Evaluation Revised Report, San Luis West Solar Project (Tetra Tech 2025d; Appendix G).
- Burrowing Owl Survey Revised Report, San Luis West Solar Project (Tetra Tech 2025e; Appendix H).
- Revised Wetlands Delineation Report, San Luis West Solar Project (Tetra Tech 2025f; Appendix I).

3.4.2 Environmental Setting

The Project Area, which encompasses all Project parcels, is located on approximately 1,265 acres of privately-owned agricultural land within the Central Valley. The Project Footprint—the area where ground disturbance is anticipated to occur—is located on approximately 770 acres of land within the Project Area. The Proposed Project is in rural unincorporated southwestern Fresno County, California, adjacent to the Governor Edmund G. Brown California Aqueduct (Tetra Tech 2025d). The Project Area comprises seven parcels. Three additional parcels that were previously included in a separate project were added to the Project Area in November 2023, and the gen-tie line was added in January 2024. A general biological survey was performed in January 2024. An additional area within the Woolf Parcel South that was not previously part of the Project Area was surveyed in July 2025. A burrowing owl habitat assessment and burrow survey was conducted within the Woolf Parcel South Addition in 2025. An additional general biological survey was performed in the Woolf Parcel South Addition in July 2025. The original and additional parcels include the following:

- Original parcels:

- Woolf Parcel North (Assessor's Parcel Numbers [APN] 075-070-54S)
- Woolf Parcel South (APN 085-050-01S)
- Sageberry Parcel (APN 078-080-55)
- Parcel 5 (APN 078-060-85S)

- Additional parcels:
  - Califland Corp parcels (APNs 085-050-47S, 085-050-48S, 085-050-84S)
  - Gen-tie line
  - Woolf Parcel South Addition (APN 085-050-01S)

The Project Area also contains three Subareas, which are made up of the following parcels:

- Subarea A: Woolf Parcel South (including Woolf Parcel South Addition), Califland Corp Parcels
- Subarea B: Woolf Parcel North
- Subarea C: Sageberry Parcel, Parcel 5

A gen-tie line was added to the Project Area in January 2024. A general biological survey and Burrowing Owl (BUOW, *Athene cunicularia*) habitat assessment were performed in the gen-tie line area in January 2024. The purpose of the gen-tie line general biological survey and BUOW habitat assessment were to identify potential biological resources that may be affected by installation of the gen-tie line. The exact route of the gen-tie line is currently in development (Tetra Tech 2025d). The gen-tie route does not contain potential jurisdictional areas based on the results of the literature review and therefore a jurisdictional delineation of this area was not required. Field surveys conducted in January 2024 for the protocol BUOW habitat assessment and general biological survey did not identify the presence of any potential jurisdictional areas.

Biological surveys were conducted for the Biological Survey Area (BSA) in 2023, 2024, and 2025, including a general biological survey; protocol burrowing owl (BUOW, *Athena cunicularia*) habitat assessment/burrow survey; BUOW breeding and winter season surveys; raptor habitat assessment and nest surveys; special-status small mammal habitat assessment; Crotch bumble bee (*Bombus crotchii*) habitat assessment; blunt-nosed leopard lizard (*Gambelia sila*) habitat assessment; rare plant surveys; and jurisdictional wetland delineation. The BSA includes the Project Area and a 150-meter buffer. The raptor habitat assessment included the Project Area and a surrounding 2-mile buffer, An additional general biological survey was performed in the Woolf Parcel South Addition in July 2025.

The following surveys were conducted within the Califland Corp parcels in addition to the general biological survey in 2023: BUOW habitat assessment, special-status mammal habitat assessment; Crotch's bumble bee habitat assessment; and blunt-nosed leopard lizard habitat assessment. In 2024, these surveys were conducted in the Califland Corp parcels: BUOW burrow survey; BUOW breeding and winter season surveys; raptor habitat assessment and nest surveys; and jurisdictional delineation. A winter season BUOW survey was conducted in both the original and Califland Corp parcels in 2024.

3.4.2.1 Vegetation Communities

Vegetation communities within the BSA were mapped during the biological surveys. No California Department of Fish and Wildlife (CDFW) sensitive natural communities were found. Table 3.4-1 summarizes the acreage of each vegetation community and land cover type within the BSA.

Table 3.4-1. Vegetation Communities and Land Cover Types within the BSA

Vegetation Communities and Land Cover Types	Project Area (acres)	150-Meter Buffer (acres)
Disturbed	883.4	205.3
Tamarix spp. Shrubland Semi-Natural Alliance	0.1	0.7
Retention Basin	3.6	0.7
Developed	104.8	78.5
Cultivated Row Crop	0.0	58.0
Cultivated Tree Orchard	124.1	551.2
Cultivated Vineyard	148.7	3.2
Oleander Hedgerow	0.0	0.4
Total	**1,264.7**	**898.0**

Notes: BSA = Biological Survey Area

Source: Tetra Tech 2025d

All Project parcels are used for active agricultural production; throughout the season, the fallow fields were regularly mowed of weeds, topsoil was disced, crops were planted, and then crops were harvested. Retention basins and ditches were also found bordering most agricultural fields. Transmission towers and poles were present within the Project Area. Retention basins and drainage ditches were also found bordering most agricultural fields. Transmission towers and poles were present within the Project Area.

A majority of the 150-meter buffer comprised agricultural fields with disced topsoil, cultivated trees, and cultivated row crops. Retention basins and drainage ditches also occurred. A portion of the 150-meter buffer included developed areas of commercial and residential use. Transmission towers, transmission poles, and ornamental trees taller than 10 feet were also present in the 150-meter buffer.

A description of each vegetation community is provided below.

Disturbed

The *disturbed* classification includes areas where the native vegetation community has been heavily influenced by human actions such as grading, trash dumping, and dirt roads, but lacks development. Disturbed is not a vegetation classification, but rather a land cover type and is not typically restricted to a known elevation. Areas of recent or consistent topsoil disturbance were mapped as disturbed.

- *Woolf Parcel North:* In March 2023, the disturbed area was a bare and disced field. In July 2023, the area had been planted with rows of cultivated tomatoes (*Solanum lycopersicum*) lined with dirt ditches with irrigation pipes.
- *Woolf Parcel South:* In March 2023, the area had 100-percent cover of non-native species, with California mustard (*Caulanthus lasiophilus*) and charlock (*Sinapis arvensis*) as dominants. In July 2023, cultivated wheat (*Triticum* sp.) was being harvested. The wheat fields are surrounded by agricultural ditches with irrigation pipes and connected by culverts. The ditches routinely sprout weeds after harvest and have been treated with herbicides (glyphosate).
- *Sageberry Parcel:* In March 2023, the area was a bare, disced field with sparce cheeseweed (*Malva parviflora*) coverage. In May 2023, the parcel was planted with irrigated row crops.
- *Parcel 5:* In March 2023, the area was overgrown with non-native species such as London rocket (*Sisymbrium irio*) and common groundsel (*Senecio vulgaris*) and other parcels in the surrounding area were completely bare. In July 2023, the field had disced topsoil and was left devoid of vegetation.
- *Califland Corp Parcels:* Disturbed areas included a 4–5-foot-tall berm and a graded pad with stored equipment and groundwater pumps surrounding a retention basin. The walls of the berm were compact; two burrows were found in the berm.
- *Woolf Parcel South Addition:* In July 2025, this disturbed area consisted of a bare and disced field.
- *Gentie:* One area was mapped as disturbed along the proposed gen-tie line. This area was located directly next to a dirt road and consisted of a fenced solar field.
- *150-meter buffer:* Disturbed areas consisted of recently plowed fields, dirt access roads, graded pads, and ruderal roadside areas. Plowed fields were primarily bare, with some presence of early-colonizing non-natives such as London rocket and common groundsel. Wall barley (*Hordeum murinum*) and other annual non-native species were also growing along road margins and on graded pads. Along Jayne Avenue (north of Califland Corp parcels and Woolf Parcel South Addition) are bare areas and non-native weeds sprouting; along Lassen Avenue (east of Califland Corp parcels) is compacted topsoil with no vegetation cover.

Tamarix spp. Shrubland Semi-Natural Alliance

This alliance was observed within the southwest area of the Woolf Parcel North and 150-meter buffer and consisted of an approximately 600-foot-long stand of athel tamarisk (*Tamarisk aphylla*) with sparse eucalyptus (*Eucalyptus* sp.). The ground beneath the athel tamarisk canopy was covered by non-native, annual grasses and debris. In July 2025, no tamarisk trees were observed within this area.

Retention Basin

A total of five retention basins were observed in the parcels: two retention basins within the Woolf Parcel North, two retention basins in the northeast corner of the Woolf Parcel South, and one retention basin centered on the eastern boundary of the Califland Corp parcels. In addition, Woolf Parcel North and South

each had one retention basin within the 150-meter buffer. The basins generally were unvegetated or had low cover of vegetation, and had varying levels of standing water or were dry. Plants species observed in the basins included one tree of heaven (*Ailanthus altissima*), cheeseweed, wall barley (*Hordeum murinum*), London rocket, shepherd's purse (*Capsella bursa-pastoris*), Russian thistle (*Salsola tragus*), broad-leaved cattail (*Typha latifolia*), and sorghum grass (*Sorghum* sp.).

Developed

Developed lands are heavily affected by human use, including landscaping, residential homes, commercial or industrial buildings and associated infrastructure, and transportation corridors. Developed areas within the Project Area consisted of buildings, hardened dirt or paved roads, and other infrastructure. Bordering the southwestern corner of Woolf Parcel North was fenced-off private property. This area was covered by concrete and gravel pads. No burrows or burrow surrogates were observed in this area. Within the 150-meter buffer of Woolf Parcel South and the Woolf Parcel South Addition are Jayne Avenue and the Pacific Gas & Electric Company (PG&E) Gates substation that were also mapped as developed. Outside of the western border of the Sageberry Parcel, along the gen-tie line, was a residential area and vehicle staging area with 10–15-foot-tall ornamental trees. In the northeastern corner of the 150-meter buffer of the Califland Corp parcels was fenced private property. This area was covered by concrete and gravel pads and did not provide plant or wildlife habitat.

Cultivated Row Crops

Cultivated row crops occurred to the southeast of Woolf Parcel North. Underneath the row crops were several species of non-native weeds covering the ground, including prickly lettuce (*Lactuca serriola*) and wall barley. In the Califland Corp parcels, this community comprised fields of cultivated wheat that were being harvested into hay bales at the time of survey in July 2023. These fields in the Califland Corp parcels had agricultural ditches connected by culverts and pipes. One section of the gen-tie line between the Woolf Parcel North and Sageberry parcel consisted of allium row crops. These fields were treated with glyphosate to control weeds.

Cultivated Tree Orchards

Cultivated tree orchards occurred around each Project parcel and along each section of the gen-tie line. This community consisted of rows of tangerine (*Citrus deliciosa*), carob (*Ceratonia siliqua*), almond (*Prunus dulcis*), and pistachio (*Pistacia vera*) trees under current agricultural production. These orchards used drip or sprinkler irrigation and were not surrounded by irrigation pipes or agricultural ditches.

Cultivated Vineyard

Cultivated vineyards bordered Woolf Parcel South to the east and were under current agricultural production. Cultivated vineyards also covered the majority of the Califland Corp parcels and consisted of wine grape row crops. The vineyards in the Woolf Parcel South and the Califland Corp parcels used drip-line irrigation and did not have irrigation ditches.

Oleander Hedgerow

In the Califland Corp parcels, oleander hedgerows bordered the northern and western portions of the site. This area provided suitable habitat for shrub-nesting bird species.

3.4.2.2 Plants

A total of 52 plant species, of which 11 were native and 41 were non-native, were observed within the BSA (Tetra Tech 2025d). A full list of plant species observed within the Project Area is included in Appendix G.

3.4.2.3 Wildlife

A total of 45 wildlife species were observed within the BSA (Tetra Tech 2025d). The majority of these species were birds, followed by invertebrates, and then mammals, reptiles, and amphibians. A list of all wildlife species observed during Project surveys is provided in Appendix G (Table 5 of the Biological Resources Evaluation Report).

3.4.2.4 Special-Status Species

Special-status species are defined as plants and wildlife that are recognized and protected by federal agencies, state agencies, and local conservation agencies and organizations. Based on the 2023–2025 survey results, the potential to occur for each special-status plant and wildlife species documented in the vicinity of the BSA has been reviewed and updated. Species within the Project Area were evaluated for potential to occur and defined as follows:

- *Not Present*. Species that were not observed within the Project Area during species-specific surveys, such as rare plant surveys.
- *Low*. The Project Area and vicinity does not support suitable habitat for the species, and the known range of the species may be outside the site.
- *Medium*. The Project Area and vicinity support suitable habitat for the species.
- *High*. The Project Area and vicinity support suitable habitat for the species, and it is known to occur nearby.
- *Observed*. Species observed within the Project Area or immediate vicinity.

Special-Status Plant Species

No special-status or rare plants were found during the surveys. Given the predominantly agricultural or ruderal landcovers within the Project Area, it is unlikely to support rare plants. Also, the use of herbicides (glyphosate) on parcels is another reason rare plants are not expected to occur. The properties within 3 miles of the Project Area are used for agriculture or solar energy generation; therefore, it is unlikely that there are nearby populations of rare plants that could colonize the Project Area (Tetra Tech 2025d).

Special-Status Wildlife Species

A total of 12 special-status wildlife species were determined to have potential to occur in the vicinity of the Project Area based on the literature review and presence of suitable habitat (Tetra Tech 2025d). Of these 12 wildlife species, five bird species were observed during the 2023–2025 biological surveys (non-nesting): Swainson's hawk (SWHA, *Buteo swainsoni*), northern harrier (*Circus hudsonius*), California horned lark (*Eremophila alpestris actia*), merlin (*Falco columbarius*), and loggerhead shrike (*Lanius ludovicianus*). No SWHA nests or individuals were observed during the 2025 survey, and the stand of tamarisk trees with a SWHA nest documented in 2024 was no longer present (Tetra Tech 2025d).

Two species were determined to have a medium potential to occur: burrowing owl and San Joaquin kit fox (*Vulpes macrotis mutica*). Five species were determined to have a low potential to occur: Crotch bumble bee, blunt-nosed leopard lizard, Nelson's antelope squirrel (*Ammospermophilus nelsoni*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), and American badger (*Taxidea taxus*). San Joaquin kit fox was determined to have a medium potential for foraging but a low potential for denning onsite.

Appendix G provides occurrence details for each special-status wildlife species. Species that were observed or have a moderate or high potential to occur are detailed in the following subsections.

Birds

Burrowing owl. No burrowing owl individuals or their sign were observed during the 2023–2025 surveys. A general biological survey, BUOW habitat assessment, and BUOW burrow survey were conducted at the Woolf Parcel South Addition and a 150-meter buffer on July 10, 2025. BUOW or their sign were not detected within the Woolf Parcel South Addition during the July 2025 habitat assessment and burrow survey.

In total, two burrow surrogates were mapped within the 150-meter buffer. No new burrows or burrow surrogates were observed within the Project Area. Due to the lack of BUOW sign at these burrow surrogates, the proximity to extensively surveyed areas of the Project Area, and the proximity to disturbed areas like West Jayne Avenue and the PG&E Gates Substation, protocol BUOW surveys are not planned within this area. The measures developed for the Project to avoid impacts to burrowing owl will apply to this area as well. The Project Area is in the known distributional range of the burrowing owl, and the site contains suitable habitat for this species due to low-growing vegetation.

Burrowing owl is a CDFW Species of Special Concern (SSC). BUOW is also a California Endangered Species Act (ESA) candidate species, meaning that take of the species is prohibited unless authorized pursuant to an incidental take permit issued by the CDFW. It is possible that BUOW may be listed as threatened or endangered under California ESA during the Project's lifespan. Meandering transects were walked within suitable BUOW habitat. New potential burrows and burrow surrogates in these parcels were mapped and investigated for signs of owl use. Any signs of burrowing owl, including pellets and whitewash, were recorded. This species breeds and lives in burrows in valley and foothill grassland habitats, as well as agricultural areas or any open dry area with low vegetation.

A total of 45 features suitable for burrowing owl use occur in the BSA: five small mammal burrows and 40 burrow surrogates in the form of culverts and pipes. Although no burrowing owl or their sign were

observed during the 2023–2025 surveys, whitewash was observed at three burrow surrogates in 2023. Whitewash, however, could be from any bird species utilizing the site. During separate 2021 surveys of adjacent areas, potential burrowing owl sign (pellets and whitewash) were observed at burrows/burrow surrogates adjacent to the California Aqueduct, about 0.5 mile east of the Project Area. BUOW is reliant on California ground squirrels (*Otospermophilis beecheyi*) for burrow excavation, and no California ground squirrels were incidentally observed during any surveys within the Project Area. California ground squirrel and small mammal occupancy of the site is likely low due to frequent discing and other disturbances from agricultural practices; however, BUOW may attempt to colonize the existing burrows/burrow surrogates, or other suitable burrow habitat that becomes available, prior to the commencement of construction activities.

There is currently a petition to list the Southern Central Valley population of BUOW within Fresno County as threatened under the California Endangered Species Act (Center for Biological Diversity et al. 2024). Although the outcome of this petition is not yet determined, it is possible that BUOW may become a listed or candidate species prior to the start of Project construction.

Swainson's hawk. Adult SWHA were observed perching in the Woolf Parcel North and Sageberry Parcel during the spring 2023 surveys. These individuals were not associated with a nest. While no SWHA nests were observed within 2 miles of the Project Area in 2023, two active SWHA nests were found in 2024 within the 2-mile buffer. SWHA is a state threatened species and is known to occur in valley and foothill grassland habitats. This species nests in California between April 1 and September 15. SWHA has been previously documented nesting about 1.5 miles north of the Project Area in the Arroyo Pasajero Westside Detention Basin from 2005 to 2011 (CDFW 2024a). This species could forage on small mammals and invertebrates in disced fields within the BSA. There is potential for SWHA nesting on transmission poles and towers within the Project Area. Although SWHA nesting on transmission poles and towers is not documented often, it does occur in areas with limited options for preferred nesting habitat (e.g., riparian and isolated trees).

Northern harrier. Northern harrier was not observed within the Project Area but was observed during surveys within the 2-mile buffer. Northern harrier is a CDFW SSC. Northern harriers nest on the ground predominantly within patches of dense, often tall vegetation and will use valley and foothill grassland, as well as weed fields and croplands. Harrier nesting appears to be associated with areas of undisturbed habitat of mixed-grass pasture, shortgrass pasture, and shrub-steppe (Slater and Rock 2005). This species has been observed in adjacent areas during surveys conducted for other projects. No nests of this species have been observed during previous surveys. The Project Area consists of agricultural land that could be used by this species if fields remained untilled during the nesting season and supported tall vegetation; however, these areas are regularly disced; therefore, there is no available nesting habitat for this species within the Project Area.

California horned lark. California horned lark was observed foraging within the 2-mile buffer during the surveys. During the 2024 general biological survey, a small flock of California horned larks was observed foraging in the Califland Corp parcels and surrounding dirt roads. In California, California horned lark is a CDFW Watch List species. This species generally occupies open spaces such as grasslands, agricultural fields, airfields, and pastures. The disced fields in the BSA provide potential nesting habitat for this species.

Merlin. One merlin was observed in the Sageberry Parcel during the surveys. Merlin is a CDFW Watch List species (wintering). This species and its nests are also protected by various federal regulations, such as the Federal Migratory Bird Treaty Act (MBTA). Merlins do not nest in the San Joaquin Valley but are known to migrate through the region (CDFW 2005). During migration, they move through various habitats to find food and roost as they make their way to wintering grounds or breeding areas. This species could forage and roost within the Project Area.

Loggerhead shrike. Loggerhead shrike was observed within the 2-mile buffer during the surveys. The loggerhead shrike is a CDFW SSC. This species nests in trees and shrubs and uses arid scrub habitats. This species was observed within the 150-meter buffer of the Project Area during previous surveys of the Project vicinity in 2021. The athel tamarisk stand observed in Project Area also provides nesting habitat for this species.

Raptors. In 2023, active raptor nests were observed in the North and South Woolf Parcels. Native birds and their nests are protected under the MBTA. Two red-tailed hawk (*Buteo jamaicensis*) nests were observed on transmission towers in the 150-meter buffer. Within the 2-mile buffer around the Project Area, a total of 11 active nests were identified five great-horned owl [*Bubo virginianus*] and six red-tailed hawk). Three inactive nests were observed in the BSA, and 15 inactive nests were found within the 2-mile buffer.

In 2024, one great-horned owl and two common raven nests were observed on transmission towers within the Project Area. One Swainson's hawk nest were found within the 150-meter buffer. One active nest of an unknown species and one inactive nest of an unknown species were found within the 150-meter buffer. Within the 2-mile buffer, six red-tailed hawk nests, four great-horned owl nests, and one Swainson's hawk nest were found. Six active nests of an unknown species and six inactive nests of an unknown species were found in the 2-mile buffer. Nests categorized as active nests of an unknown species had unidentifiable individuals within the nest, while no individuals were observed during any 2024 surveys at inactive nests of an unknown species. No raptor nests or raptor nesting habitat was observed in the Woolf Parcel South Addition in 2025. A list of all nests observed is provided in the Biological Resources Evaluation Report (Appendix G).

Mammals

No San Joaquin kit fox, American badger, Nelson's antelope squirrel, Tulare grasshopper mouse, or their sign were observed incidentally during the field surveys for other species. Most of the Project Area supports row crops that are actively irrigated. Saturated soils are not suitable for small burrowing mammals. Suitable habitat for small mammals is present within the disturbed areas of the BSA, particularly the retention basins. However, retention basins in the BSA were found to consistently contain water during the spring and summer seasons of 2023 and 2024 between April and July, further reducing the amount of suitable habitat in the BSA for special-status mammals.

San Joaquin kit fox. San Joaquin kit fox can have expansive home ranges within foothill and grassland communities. Within the Central Valley, this species is known to forage in habitats that have been modified by row crops and orchards within 1 to 2 miles of their dens (Warrick et al. 2007). Three soil dens and 30 den surrogates, including 11 culverts and 19 pipes, that are an appropriate size for San Joaquin kit fox were found in the BSA. Active agricultural practices within the BSA have resulted in regular ground

disturbance from discing, weed mowing, digging or filling ditches, and grading access roads. Any dens dug by San Joaquin kit fox would likely be negatively affected by agricultural practices, which may discourage denning on the site. Several den surrogates present in the BSA that could serve as San Joaquin kit fox den surrogates were used for irrigation and were partially buried in mud; therefore, they were unsuitable for San Joaquin kit fox denning. Given this high level of human activity due to the ground-disturbing effects of ongoing agricultural activity, it is not expected that San Joaquin kit fox would den at the site. There is potential for San Joaquin kit fox to forage on the site because previously recorded dens are within 2 miles of the Sageberry Parcel and Parcel 4.

American badger. American badger can have expansive home ranges within foothill and grassland communities. American badger is known to forage on the outskirts of cultivated wheat fields. Although no natural burrows or dens were found during 2023 surveys that were the appropriate size for American badger, these species could migrate through the BSA and dig burrow complexes from small mammal burrows at any time. Active agricultural practices within the BSA have resulted in regular ground disturbance from weed mowing, digging or filling ditches, and grading access roads. Given this high level of human activity due to the ground-disturbing effects of ongoing agricultural activity, and the lack of dens observed within the Project Area, it is not expected that American badger would den at the site.

Nelson's Antelope squirrel and Tulare grasshopper mouse. Nelson's Antelope squirrel is not known to inhabit areas of agricultural cultivation, and use of insecticides has contributed to regional declines of Tulare grasshopper mouse. Although some small mammal burrows were found in Parcel 4, the Woolf parcels, the Califland Corp parcels, and the 150-meter buffer near trees and within retention basins, there is no suitable native habitat to support these species. Rodenticides are not used on the Project parcels; however, frequent discing and other agricultural practices have greatly limited rodent presence in agricultural areas within the BSA. Habitats surrounding the BSA are fragmented and highly disturbed; therefore, these species are not likely to occur within the BSA.

Bats. Although roosting bat species have not been documented within the Project vicinity, it is possible for roosting bats to occur in the BSA. Bats are known to roost within trees, caves, mines, and artificial structures. There are no caves or mines within the BSA, and a limited number of trees. Bats could use the few existing trees as well as buildings and other artificial structures on the BSA as roosting habitat. Foraging habitat for bats includes agricultural land. Bats could forage on the BSA and in the Project vicinity within agricultural fields, orchards, vineyards, hedgerows, and retention basins

3.4.2.5 Sensitive Natural Communities

Sensitive natural communities are designated by CDFW and identified in the CDFW's California Natural Diversity Database (CNDDB, CDFW 2024a). Sensitive natural communities may have limited range and distribution, a low proportion of occurrences that are of good ecological integrity, or significant threats such as residential and commercial development, agriculture, energy production and mining, and invasive and other problematic species, among others. CDFW considers both scope and severity when assessing overall threat. Natural communities with ranks of S1 to S3 are considered Sensitive natural communities and must be addressed in the environmental review processes of the California Environmental Quality Act (CEQA). One sensitive natural community was identified in the literature search: Great Valley mesquite

scrub. This sensitive community has not been documented onsite, and no CDFW sensitive natural communities were found during surveys (CDFW 2024a; Tetra Tech 2025d).

3.4.2.6 Critical Habitat

Critical habitat is designated by the United States Fish and Wildlife Service (USFWS) and is defined as specific areas that are essential to conservation of a federally listed endangered or threatened species. Critical habitat supports the continued conservation of imperiled species by guiding cooperation within the federal government. Critical Habitat of a species may include forging, breeding, roosting, and refuge areas, as well as movement and migration areas. The BSA is not located within or near designated or proposed Critical Habitat for federally listed plant or wildlife species.

3.4.2.7 Wildlife Movement

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor varies but includes areas such as greenbelts, refuge systems, underpasses, and biogeographic land bridges. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, that connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor use and wildlife movement patterns varies greatly among species.

The Project Area is not located within a Natural Landscape Block or Essential Connectivity Area. The closest Essential Connectivity Area is approximately 3 miles south of the Project Area, and the closest Natural Landscape Block is approximately 3 miles southwest of the Project Area (CNPS 2025a). The Project Area is located within the Pacific Flyway, which is a significant avian north–south flight route that stretches 4,000 miles from the Arctic to South America. Millions of birds annually migrate along the Pacific Flyway and stop along the way at sites for nesting, wintering, resting, and foraging, which are known as Important Bird Areas (IBAs). However, no designated IBAs occur within or near the Project Area (Audubon California 2025). The closest IBA is approximately 14 miles southeast of the Project Area: Sand Ridge – Tulare Lake Bed. The Project Area is not located near the San Joaquin River, the Kings River, or the North Kings Deer Herd migration corridor and fawn production areas. In addition, the Project Area is not located within a corridor or linkage described in the USFWS *Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS 1998).

Although the Arroyo Pasajero Westside Detention Basin is located about 2.5 miles north of the Project Area and contains native habitats, it is located across West Gale Avenue, which is a heavily used paved road that acts as a potential barrier to migration for some nonvolant species. Disturbed drainage ditches that occur within the Project Area are used for agricultural irrigation, have no connectivity to offsite areas,

and are bound on either side by heavily used paved roads (West Gale Avenue and West Jayne Avenue). The Project Area does not contain or function as a wildlife movement corridor for the following reasons: it is heavily disturbed by agriculture, which has removed native habitat and limits habitat continuity and wildlife movement; it does not contain wildlife travel routes or wildlife crossings that connect open spaces; it does not connect to open space areas or provide connectivity between large areas of open space on a local or regional scale; and it does not contain suitable cover or forage to attract or support wildlife species. The Project Area is, therefore, unlikely to provide a significant movement corridor for wildlife species.

3.4.2.8 Jurisdictional Wetlands and Waters

Jurisdictional wetlands and waters include aquatic features such as streams, creeks, drainages, lakes, ponds, riparian areas, and various types of vegetated and unvegetated wetlands that are regulated by federal and/or state agencies, including the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW.

A wetlands delineation was performed in the original parcels within the Project Area to assess potential jurisdictional waters and wetland features in April 2021 and April 2023. A wetlands delineation in the additional Califland Corp parcels was performed in January 2024. A general biological survey, including an assessment of any potential jurisdictional features, was performed in the Woolf Parcel South Addition in July 2025. A raptor habitat assessment to identify any new raptor nesting habitat was performed within the Woolf Parcel South Addition in July 2025. A jurisdictional wetlands delineation was conducted within the Project Area and a total of eight features jurisdictional to the CDFW were identified and mapped. A total of seven jurisdictional features were identified and mapped within the original parcels in the Project Area, and one jurisdictional feature was identified and mapped within the California Corps parcels. Out of these eight features, only one (Feature W4 in Woolf Parcel North) was located within the Project Footprint. The Project Area features consisted of seven agricultural retention basins and one ditch.

Surface water was observed at five of the seven basins from agricultural irrigation or stormwater runoff. The feature within the Califland Corp parcels (Feature W5) and Features W6, W7, and W8 exhibited wetland hydrology, hydric soil, and hydrophytic vegetation (Tetra Tech 2025f).

Additional details on the location, site condition, and jurisdiction of these features are provided in the Wetlands Delineation Report (Appendix I).

3.4.3 Regulatory Setting

3.4.3.1 Federal

Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3).

For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan is developed.

Migratory Bird Treaty Act

The MBTA of 1918 implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668 to 668d), as amended, prohibits anyone, without a permit issued by USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. The Bald and Golden Eagle Protection Act also implements criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle... [or any golden eagle], alive or dead, or any part (including feathers), nest, or egg thereof." The Bald and Golden Eagle Protection Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." In addition to immediate impacts, the Bald and Golden Eagle Protection Act also covers effects that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the USACE. The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or ground water at a frequency and duration

sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency acts as a cooperating agency to set policy, guidance, and criteria for use in evaluation permit applications and also reviews USACE permit applications. The USACE regulates *fill* or dredging of fill material within its jurisdictional features. *Fill material* means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Resources Control Board (SWRCB), administered by each of nine California RWQCBs.

3.4.3.2 State

California Endangered Species Act

The California ESA generally parallels the main provisions of the federal ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called *candidates* by the State). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

Fully Protected Species

The State of California first began to designate species as fully protected in the 1960s, prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included birds (Section 3511), mammals (Section 4700), amphibians and reptiles (Section 5050), and fish (Section 5515). Most fully protected species have since been listed as threatened or endangered under federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act

The Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900 to 1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act (NPPA) is administered by CDFW. The Fish and Wildlife Commission has the

authority to designate native plants as *endangered* or *rare* and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code Sections 2050 to 2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

California Fish and Game Code

In addition to the Fish and Game Code sections mentioned above, the following Sections are applicable to the Project:

- *Section 3503.* It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take. Avoidance measures sufficient to prevent incidental take of bird nests and eggs protected by this statute must be incorporated into the Project.
    - *Section 3503.5.* All raptors and their nests are protected under this section. Avoidance measures sufficient to prevent incidental take of these species, their eggs, and their nests protected by this statute must be incorporated into the Project.
- *Section 3513.* This section protects California's migratory birds by making it unlawful to take or possess any migratory non-game bird as designated by the MBTA, except as authorized in regulations adopted by the federal government under provisions of the MBTA. Except as permitted by the USFWS under a Habitat Conservation Plan, avoidance measures sufficient to prevent incidental take of these species, their eggs, and their nests protected by this statute must be incorporated into the Project.

Lake and Streambed Alteration Program

Pursuant to Sections 1600 through 1616 of the California Fish and Game Code, the CDFW regulates all substantial diversions, obstructions, or changes to the natural flow or the bed, channel, or bank of any river, stream, or lake which provides habitat and supports fish or wildlife. The CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." "Bank" means the slope or elevation of land that bounds the bed of the stream in a permanent or longstanding way, and that confines the stream water up to its highest level. "Lake" includes "natural lakes or man-made reservoirs."

Rivers, streams, lakes, and riparian vegetation that provide habitat for fish and wildlife species are subject to jurisdiction by the CDFW under Sections 1600 through 1616 of the California Fish and Game Code. Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Section 2785(e) defines "riparian habitat" as lands that contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source. The CDFW regulates the bed, bank to bank, as well as associated riparian vegetation. The CDFW has interpreted jurisdictional boundaries to be defined by the tops of stream banks (i.e., the limit of stream influence) and/or the limit of the canopy of riparian

vegetation (outer drip line) that is hydrologically connected to river, stream, or lake, whichever is greatest. As a result, the area of CDFW jurisdiction is usually greater than the active channel and overlaps and extends beyond the USACE/RWQCB jurisdiction.

The Lake and Streambed Alteration Program requires execution of an agreement with the CDFW before any activity substantially modifies a river, stream, or lake. It is not legal to alter the bed or bank of a stream or lake or their natural water flow without a CDFW agreement. The California Fish and Game Code Section 1602 requires an entity to notify the CDFW of any proposed activity that may substantially modify a perennial, intermittent, and ephemeral river, stream, or lake in the state (CDFW 2024b). Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- 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.

Porter-Cologne Water Quality Control Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Control Act (hereafter referred to as Porter-Cologne Act). These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)].

Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050[e]). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (referred to as the Procedures) for inclusion in the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Resolution No. 2019-0015). The new Procedures include:

- definition of wetlands and aquatic resources that are Waters of the State,
- description of application requirements for individual orders (not general orders) for water quality certification, or waste discharge requirements,

- description of information required in compensatory mitigation plans, and
- definition of exemptions to application procedures.

The Office of Administrative Law approved the procedures on August 28, 2019, and the rule went into effect May 28, 2020.

3.4.3.3 Local

Fresno County General Plan

The Fresno County (County) General Plan was reviewed for policies applicable to the protection of biological resources, including the following (Fresno County 2024):

- *Goal OS-B:* To maintain healthy, sustainable forests in Fresno County, conserve forest resources, enhance the quality and diversity of forest ecosystems, reduce conflicts between forestry and other uses, encourage a sustained yield of forest products, protect and conserve lands identified as suitable for commercial timber production within the county, and conserve forest lands that have other resource values including recreation, grazing, watershed, and wildlife habitats.
    - *Policy OS-B.2: Forest Management Coordination.* The County shall work closely with agencies involved in the management of forest ecosystems and shall coordinate with State and Federal agencies, private landowners, and private preservation/conservation groups in habitat preservation and protection of rare, endangered, threatened, and special concern species, to ensure consistency in efforts and to encourage joint planning and development of areas to be preserved. The County shall encourage State and Federal agencies to give notice to and coordinate with the County on any pending, contemplated, or proposed actions affecting local communities and citizens of the County. The County will encourage State and Federal agencies to address adverse impacts on citizens and communities of Fresno County, including environmental, health, safety, private property, and economic impacts.
- *Goal OS-E:* To help protect, restore, and enhance habitats in Fresno County that support fish and wildlife species so that populations are maintained at viable levels
    - *Policy 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 USFWS and CDFW to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed. Important habitat and habitat components include nesting, breeding, and foraging areas, important spawning grounds, migratory routes, migratory stopover areas, oak woodlands, vernal pools, wildlife

movement corridors, and other unique wildlife habitats (e.g., alkali scrub) critical to protecting and sustaining wildlife populations.

- *Policy OS-E.2: 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 USFWS and/or the CDFW.
- *Policy 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.
- *Policy OS-E.4: Wildlife Habitat Management Practices*. The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by CDFW officials and the USFWS.
- *Policy OS-E.7: Pesticide Use Monitoring*. The County shall continue to closely monitor pesticide use in areas adjacent to habitats of special-status plants and animals.
- *Policy OS-E.8: Pest Control*. The County shall promote effective methods of pest (e.g., ground squirrel) control on croplands bordering sensitive habitat that do not place special-status species at risk, such as the San Joaquin kit fox.
- *Policy 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.
- *Policy OS-E.10: Permanent Protection*. The County shall support State and Federal programs to acquire significant fish and wildlife habitat areas for permanent protection and/or passive recreation use.
- *Policy OS-E.17: Endangered Species Habitat*. The County should preserve areas identified as habitats for rare or endangered plant and animal species primarily through the use of open space easements and appropriate zoning that restrict development in these sensitive areas.
- *Policy OS-E.18: Habitat Easements and Regulation*. 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.

- *Policy 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 MBTA 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 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.

  If active nests are located, all construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 250 feet for non-raptor bird species and at least 500 feet for raptor species, unless determined otherwise by the qualified biologist. Buffer distances for bird nests shall be site-specific and an appropriate distance, as determined by a qualified biologist. The buffer distances shall be specified to protect the bird's normal behavior thereby preventing nesting failure or abandonment. The buffer distance recommendation shall be developed after field investigations that evaluate the bird(s) apparent distress in the presence of people or equipment at various distances. Abnormal nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed towards project personnel, standing up from a brooding position, and flying away from the nest. The qualified biologist shall have authority to order the cessation of all nearby project activities if the nesting birds exhibit abnormal behavior which may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established.

  Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed, and young have fledged the nest prior to removal of the buffer. The biologist shall submit a report of these preconstruction nesting bird surveys to the County to document compliance within 30 days of its completion.

- *Goal OS-F:* To preserve and protect the valuable vegetation resources of Fresno County.

  - *Policy 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.

- *Policy 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.

3.4.4 Impacts Analysis

3.4.4.1 Methodology

Table 3.4-2 lists the field surveys that were conducted in 2023–2025 and their respective timing.

Table 3.4-2. Field Survey Schedule

Survey(s)	Parcel(s)	Date(s)	Notes
General biological survey	Original	March 19–20, 2023	–
General biological survey	Califland Corp	July 12, 2023	–
General biological survey	Gen-Tie	January 10, 2024	–
General biological survey	Woolf Parcel South Addition	July 10, 2025	–
Protocol burrowing owl habitat assessment and burrow survey*	Original	March 19–20, 2023	Conducted concurrently with general biological survey in the original parcels.
Protocol burrowing owl habitat assessment and burrow survey*	Califland Corp	July 12, 2023 April 1, 2024	–
Protocol BUOW habitat assessment and burrow survey*	Woolf Parcel South Addition	July 10, 2025	–
Protocol burrowing owl habitat assessment*	Gen-Tie	January 10, 2024	–
Protocol breeding season burrowing owl surveys*	Original	March 19–20, 2023 April 19, 2023 May 15, 2023 July 11, 2023	–
Protocol breeding season burrowing owl surveys*	Califland Corp	April 1, 2024 April 24, 2024 May 30, 2024 June 26, 2024	–
Protocol winter season burrowing owl surveys*	Original, Califland Corp	January 10, 2024	–
Raptor habitat assessment	Original, Califland Corp	March 19–20, 2023	Conducted concurrently with general biological survey in the original parcels.
Raptor habitat assessment	Woolf Parcel South Addition	July 10, 2025	Conducted concurrently with general biological survey in the Woolf Parcel South Addition.

Table 3.4-2. Field Survey Schedule

Survey(s)	Parcel(s)	Date(s)	Notes
Raptor nest surveys	Original, Califland Corp	April 19, 2023 May 15, 2023 July 11, 2023 April 1–2, 2024 April 4, 2024 April 24–25, 2024 May 30, 2024 June 25–26, 2024	–
Blunt-nosed leopard lizard habitat assessment/Crotch's bumble bee habitat assessment	Original	March 19–20, 2023	Conducted concurrently with general biological survey in the original parcels.
Blunt-nosed leopard lizard habitat assessment/Crotch's bumble bee habitat assessment	Califland Corp	July 12, 2023	Conducted concurrently with general biological survey in the Califland Corp parcels.
BNLL habitat assessment/ Crotch's bumble bee habitat assessment	Woolf Parcel South Addition	July 10, 2025	Conducted concurrently with general biological survey in the Woolf Parcel South Addition.
Special-status mammal habitat assessment	Original	March 19–20, 2023	Conducted concurrently with general biological survey in the original parcels. Also assessed during 2023 breeding season burrowing owl surveys.
Special-status mammal habitat assessment	Califland Corp	July 12, 2023	Conducted concurrently with general biological survey in the Califland Corp parcels. Also assessed during 2024 breeding season BUOW surveys
Special-status mammal habitat assessment	Woolf Parcel South Addition	July 10, 2025	Conducted concurrently with general biological survey in the Woolf Parcel South Addition.
Rare plant surveys	Original	March 19–20, 2023 April 19, 2023 May 15, 2023 July 11, 2023	Conducted concurrently with 2023 general biological survey and breeding season burrowing owl surveys in the original parcels.
Jurisdictional delineation*	Original, Califland Corp	April 17, 2023 January 10, 2024	Focused delineation at potential jurisdictional features.

Notes: *Results of the burrowing owl surveys and jurisdictional delineation are provided in separate reports.
BNLL = Blunt-nosed leopard lizard; BUOW = Burrowing Owl

Source: Tetra Tech 2025d

Biological Resources Evaluation

In addition to the biological surveys listed in Table 3.4-2, a literature review was conducted that included information from aerial and historical imagery, U.S. Geological Survey (USGS) topographic maps, the

CNDDB (CDFW 2024a), California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2023), eBird database (eBird 2023), USFWS Critical Habitat Portal (USFWS 2023), CDFW Biogeographic and Information Observation System Habitat Connectivity Viewer (CDFW 2023), Audubon California IBA Interactive Site Map (Audubon California 2025), USFWS *Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS 1998), USFWS National Wetlands Inventory (NWI) database (USFWS 2024), and the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2024).

Burrowing Owl Survey

The literature search and field methods used for the protocol burrowing owl habitat assessment, burrow survey, breeding season surveys, and winter season survey were performed in accordance with the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (The California Burrowing Owl Consortium 1993) and the *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game 2012). The literature review included querying CDFW's CNDDB (CDFW 2024a), the USGS 7.5-Minute Topographic Map *Huron* Quadrangle, and aerial and historical imagery.

Wetlands Delineation

Prior to the field survey, a literature review was conducted to evaluate potential jurisdictional areas within the Project Area. The USGS Huron 7.5-Minute Topographic Quadrangle Map, aerial and historical imagery (Google Earth), USFWS NWI database (USFWS 2024), and the USDA NRCS Web Soil Survey (NRCS 2024) were reviewed. One NWI riverine feature is mapped within the northwestern corner of the Woolf Parcel North portion of the Project Area (USFWS 2025). This riverine feature was mapped using infrared imagery from 1987 and could not be located during surveys within the Project Area. In addition, a freshwater emergent wetland consisting of an artificial, excavated wetland basin is present within the eastern portion of Parcel 5 (Tetra Tech 2025f).

A wetlands delineation was performed in the original parcels and within the additional Califland Corp parcels. Delineations were conducted at any potential jurisdictional wetlands, Waters of the U.S., and State, and areas potentially under CDFW jurisdiction. The gen-tie route does not contain potential jurisdictional areas based on the results of the literature review; therefore, a jurisdictional delineation of this area was not required. The procedures described in the *Interim Regional Supplement to the Corps of Engineering Wetland Delineation Manual: Arid West Region* (USACE 2008) were used to identify onsite wetlands and Waters of the U.S. that are potentially subject to regulation under Section 404 of the CWA. The USACE delineation methodology was also used to map potential Waters of the State that were evaluated for RWQCB jurisdiction. Areas of CDFW jurisdiction were determined by the presence of defined bed, banks, and channel, or presence of a lake or pool, and were measured to the top of bank or the edge of riparian vegetation.

3.4.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to biological resources are considered significant if implementation of the Proposed Project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- 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 CDFW or USFWS;
- 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;
- 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;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.4.3 Impact Discussion

Threshold 1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Special-Status Plants

The Proposed Project would include ground disturbance during construction that would result in impacts to special-status plant species, if present. The Project Area, however, consists of disturbed agricultural uses and provides poor habitat for special-status plants. In addition, no special-status plant species were observed during rare plant surveys conducted during the blooming period and these species are not present within the Project Area; therefore, no impacts would occur.

Special-Status Wildlife

Construction

The Proposed Project would include ground disturbance and construction activities that would result in direct or indirect impacts to special-status wildlife species, if present. Direct impacts would result from removal of existing habitat, and interactions with onsite traffic and equipment operations including vehicle collisions, crushing, or entrapment/burial. Indirect impacts would include noise from construction activities or presence of onsite personnel that elicit wildlife avoidance behaviors, startle responses, or habitat abandonment. Individual discussions for special-status wildlife species observed within the Project Area or that have a high or medium potential to occur are provided below, including burrowing owl,

Swainson's hawk, northern harrier, California horned lark, merlin, loggerhead shrike, San Joaquin kit fox, and nesting birds. Special-status wildlife species with a low potential to occur are unlikely to be present within the Project Area, and no impacts to these species would occur, including Crotch bumble bee, blunt-nosed leopard lizard, Nelson's antelope squirrel, Tulare grasshopper mouse, and American badger.

Burrowing owl. Construction of the Proposed Project could cause direct impacts to BUOW and its habitat (e.g., low growing vegetation and suitable burrows), including injury or mortality of individuals. No BUOW individuals or their sign were observed during surveys within the Project Area; however, a total of 45 features suitable for BUOW use (burrows and burrow surrogates) occur within the BSA. Although no BUOW individuals or BUOW-specific sign were observed during the 2023 and 2025surveys, whitewash was observed at three burrow surrogates in 2023. Whitewash, however, could be from any bird species utilizing the site. Potential burrows/burrow surrogates were found along the Project Area boundaries and within 150 meters of the site. Although direct impacts would be confined to the Project Area, indirect impacts to BUOW could also occur during construction if occupied burrows are present offsite but within 500 feet of the Project Area. Onsite construction noise could cause an owl to abandon an offsite occupied burrow. Additional indirect impacts may include vehicle and equipment emissions and generation of dust. Implementation of Mitigation Measures BIO-1 and BIO-7 would reduce the potential impacts to BUOW during construction to less than significant.

Swainson's hawk. Construction of the Proposed Project could cause direct impacts to SWHA and its foraging habitat. Adult SWHA were observed perched in two areas of the Project Area. Two active SWHA nests were found in 2024 within the 2-mile buffer. One nest was located within the 150-meter buffer in a stand of tamarisk trees, whereas the second nest was located in an old orchard tree 2 miles south of the Project Area, on the boundary of the 2-mile buffer. Although suitable nesting trees are not available within the Project Area, SWHA could nest on transmission poles and towers within the Project Area because the Project vicinity has limited preferred nesting habitat (e.g., riparian and isolated trees). Although direct impacts would be confined to the Project Area, indirect impacts to SWHA could also occur during construction if nests are present within 0.5 mile of the Project Area. Onsite construction noise and activities could disrupt a nest and cause nest abandonment. Implementation of Mitigation Measures BIO-4, BIO-5, and BIO-7 would reduce the potential impacts to Swainson's hawk during construction to less than significant.

Northern harrier, California horned lark, Merlin, and Loggerhead shrike. Northern harrier, California horned lark, and merlin were observed during surveys, and loggerhead shrike was observed within 2 miles of the Project Area. No nests of these species were found. The Project Area provides foraging habitat for all four species but only provides nesting habitat for California horned lark and loggerhead shrike. Northern harrier prefers undisturbed pasture or shrub-steppe habitat for nesting, which does not occur onsite; merlin does not breed in California. These are highly mobile species, and adult individuals are unlikely to be directly affected by Project activities. However, direct mortality or injury could occur to nestlings or nest destruction during construction, if present onsite. Indirect impacts may also occur to nesting individuals from dust generation, noise, vibrations, and increased human activity. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant.

Implementation of Mitigation Measures BIO-5 and BIO-7 would reduce the potential impacts to Northern harrier, California horned lark, merlin, and loggerhead shrike to less than significant.

San Joaquin kit fox. San Joaquin kit fox is unlikely to den within the Project Area because soils are heavily disturbed by agricultural practices; however, this species may forage within the Project Area. No San Joaquin kit fox or their sign were observed during the surveys, and culverts and pipes present in the BSA that could serve as potential habitat were actively used for irrigation. Direct impacts to this species could include loss of habitat and potential dens due to construction activities. Construction activities could also result in direct injury or mortality from collisions with vehicles or equipment or crushing of dens. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant. Indirect effects due to displacement of San Joaquin kit fox as a result of construction noise or increased human presence could also occur. However, implementation of Mitigation Measures BIO-6 and BIO-7 would reduce the potential impacts and ensure that impacts to this species during construction are mitigated; therefore, impacts to San Joaquin kit fox would be less than significant.

Nesting birds. Potential impacts to nesting birds during construction could include direct mortality or injury to nestlings or nest destruction during vegetation clearing or grading. Increased noise and human activity onsite could also result in indirect impacts, including reduced reproductive success and nest abandonment in areas adjacent to the Project Area. Impacts could occur if construction is conducted during the bird nesting season in Fresno County, which is defined as February 1 through September 15. However, implementation of Mitigation Measures BIO-5 and BIO-7 would reduce the potential impacts and ensure that impacts to these species during construction are mitigated; therefore, impacts to nesting birds would be less than significant.

Roosting Bats. Although roosting bats have not been documented within the Project vicinity, roosting bats could occur within the BSA. Bats are known to roost in trees, caves, mines, and artificial structures. There are no caves or mines within the BSA, and few trees. Bats could use the few existing trees as well as buildings and other artificial structures within the BSA as roosting habitat. Foraging habitat for bats includes agricultural land. Bats could forage within the BSA and in the Project vicinity within agricultural fields, orchards, vineyards, hedgerows, and retention basins. Roosting bats have the potential to occur within the Project Area. However, implementation of Mitigation Measure BIO-8 would reduce the potential impacts and ensure that impacts to this species during construction are mitigated. As such, impacts to roosting bats would be less than significant.

Operations and Maintenance

Project implementation would remove potential habitat for special-status species within the Project Area. Project operations and maintenance activities are unlikely to result in direct impacts to special-status species. Security lighting for the Project could result in indirect impacts to special-status wildlife species adjacent to the Project Area; however, all lighting would comply with the Fresno County Zoning Code and would be directed downward and shielded to minimize the potential for glare or spillover, which would reduce potential impacts.

Swainson's hawk and other raptor species may use solar panels, fencing, or structures within the Project Area as hunting perches. Potential direct impacts to raptor species from Project operations and

maintenance may include electrocution from and/or collision into power lines, solar panels, or other infrastructure.

In a review of bird mortality at utility-scale solar facilities in the Southwestern United States, 669 avian detections were recorded across 13 site-years, with the highest number of carcasses detected in a site-year single visit was 13. The absence of large-scale mortality events of nocturnal migrants is likely best explained by the low stature of solar panels and the general lack of lighting (Kosciuch et al. 2020). Overall, the risk of collision is low and is unlikely to adversely affect raptor populations. In addition, these impacts would be reduced through implementation of mitigation measures to ensure that power lines would be installed per the most current Avian Power Line Interaction Committee standards. As such, impacts to Swainson's hawk and other raptors from Project operations and maintenance would be less than significant.

Impacts to migratory birds may occur during operations and maintenance from collisions with Project facilities and equipment, including power lines, fencing, and solar arrays. However, the Project Area will consist of low-height photovoltaic arrays, which represent a much lower collision risk compared to other types of renewable energy facilities, such as wind turbines, and only minimal lighting would be used onsite to avoid attracting migratory bird species. Although impacts to individual migratory birds may occur, the risk of significant impacts to migratory bird populations is minimal. In a review of bird mortality for utility-scale solar facilities, a total of 669 bird fatalities were documented, over half of which were common songbirds with large populations numbering in the millions (Kosciuch et al. 2020). Waterbird carcasses were primarily found at sites within 60 miles of the Salton Sea, with fewer or no waterbird carcasses found at sites further away from the Salton Sea (Kosciuch et al. 2020). The Project is located about 300 miles from the Salton Sea, in an area that lacks large bodies of water; therefore, there is a low chance of waterbird fatalities within the Project Area. In addition, implementation of Mitigation Measures BIO-5 and BIO-7 would reduce the potential impacts to migratory birds to less than significant.

Decommissioning

The Project Area would be restored to pre-construction conditions upon Project decommissioning. Any special-status species that have colonized the Project Area during operations and maintenance could be affected by decommissioning activities, which would be comparable to the direct impacts described for construction. However, because decommissioning would only have direct impacts to areas that were disturbed and developed during Project construction, direct impacts to native habitat and special-status species are expected to be less than significant. Similarly, indirect impacts for decommissioning would be comparable to indirect impacts described for construction but would depend on the habitats present adjacent to the Project Area during decommissioning. Special-status wildlife species with potential to inhabit the solar facility site during decommissioning include burrowing owl, San Joaquin kit fox, American badger, nesting birds, and roosting bats. Implementation of Mitigation Measures BIO-1 through BIO-8 would reduce the potential impacts to special-status species during decommissioning to less than significant.

Threshold 2: Would the project 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 CDFW or USFWS?

No riparian habitat or other sensitive natural communities are located within the Project Area or within the gen-tie line. As such, no impacts to riparian habitat or other sensitive natural communities would occur as a result of the Proposed Project.

Threshold 3: Would the project 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?

Four features (W5, W6, W7, and W8) met all three USACE wetland parameters (wetland hydrology, hydric soil, and hydrophytic vegetation) required to be considered a USACE Wetland. All features (W1 through W8) met the wetland hydrology parameter, and Features W1, W5, W6, W7, and W8 also met the hydric soil parameter. All eight of these are isolated features that are not jurisdictional to the USACE. In addition, these features are exempt from RWQCB jurisdiction and are not Waters of the State. Areas of CDFW jurisdiction were found onsite, which includes all eight of the features (Table 3.4-3).

Section 404 Jurisdictional Wetlands

Four features met all three USACE wetland parameters required to be a USACE Wetland (Features W5, W6, W7, and W8). No atypical or problematic situations were encountered. Wetland hydrology was found at all features in the form of surface soil cracks, surface water, and/or saturation. Feature W5 also exhibited water-stained leaves, aquatic invertebrates in the form of snail shells, and a thin muck surface. Features W1 and W5 had hydric soil and met the redox depressions indicator and 1 centimeter muck indicator, respectively. Features W6, W7, and W8 also had hydric soil, all of which met the depleted matrix indicator. Feature W5 supported hydrophytic vegetation in the form of broadleaved cattail. Feature W6 had hydrophytic vegetation dominated by narrow-leaved willow and narrow-leaved cattail. Hydrophytic vegetation at W7 was dominated by narrow-leaved willow and tamarisk, whereas the hydrophytic vegetation at W8 was dominated by sparse tamarisk. None of these isolated features are jurisdictional to the USACE because they do not connect to traditional navigable waters and are artificial ponds used for agricultural irrigation that are exempt from jurisdiction.

Section 404 Jurisdictional Waters of the U.S.

Features W1 through W8 are isolated features that do not connect to any other offsite aquatic features. In absence of agricultural irrigation, these features would be considered ephemeral and likely receive water only in response to rainfall; therefore, they are not considered relatively permanent waters. Areas of CDFW jurisdiction were found onsite, which includes all eight of the features (W1 through W8). These features are isolated and are not tributaries of or adjacent to Waters of the U.S. or traditional navigable waters. As such, these features are not Section 404 Waters of the U.S.

Features W1 through W7 are exempt from USACE Section 404 jurisdiction because they are artificial ponds created by excavating dry land to collect and retain water and used for agricultural irrigation

purposes. Feature W8 is exempt from USACE Section 404 jurisdiction because it is a ditch excavated in and draining only dry land, and that does not carry a permanent flow of water.

Table 3.4-3. Delineation Results

Feature No.	Sample Point	Hydrophytic Vegetation	Hydric Soil	Wetland Hydrology	USACE Wetlands/ Waters of the U.S.	RWQCB Waters of the State	CDFW Jurisdiction	Notes
W1	W1-UP	–	–	–	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Feature W2 via a metal culvert but is isolated from other aquatic features. Standing water was present during the 2023 survey.
	W1-WL	–	Present	Present				
W2	W2-UP	–	–	–	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Feature W1 via a metal culvert but is isolated from other aquatic features. Standing water was present during the 2023 survey.
	W2-WL	–	–	Present				
W3	W3-UP	–	–	–	No	No	Yes	Soft bottom retention basin that is isolated from other aquatic features. This feature was dry during the 2023 survey.
	W3-WL	–	–	Present				
W4	W4-UP	–	–	–	No	No	Yes	Soft bottom retention basin that is isolated from other aquatic features. Standing water was present during the 2023 survey.
	W4-WL	–	–	Present				
W5	W5-UP	–	–	–	No	No	Yes	Soft bottom retention basin that is isolated from other aquatic features. Standing water was present during 2023 and 2024.
	W5-WL	Present	Present	Present				
W6	W6-UP	–	–	–*	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Features W7 and W8 via metal culverts. No standing water was present during the April 2021 survey.
	W6-WL	Present	Present	Present				
W7	W7-UP	–	–	–*	No	No	Yes	Soft bottom retention basin that is hydrologically connected to Features W6 and W8 via metal culverts. No standing water was present during the April 2021 survey.
	W7-WL	Present	Present	Present				
W8	W8-UP	–	–	–*	No	No	Yes	Drainage ditch with a defined bed, bank, and channel. Standing water was present in one small area of this feature during the April 2021 survey.
	W8-WL	Present	Present	Present				

Note: CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers
* Surface soil cracks were present, but the sample location was within a heavily used dirt road and soil cracks may be a result of compaction and ponding of irrigation water. Therefore, wetland hydrology was not met.

RWQCB Waters of the State

RWQCB Waters of the State include USACE Section 404 jurisdictional wetlands and Waters of the U.S. No Waters of the U.S. were found within the Project Area, and all eight features (W1 through W8) comprise isolated, artificial retention basins and a ditch, all of which are exempt from RWQCB jurisdiction. Although four features met all three USACE wetland parameters (Features W5 to W8), these features are exempt from RWQCB jurisdiction because they are currently used and maintained strictly for agricultural crop irrigation; were created for the purposes of irrigation water catchment, storage, and distribution; and are not part of the natural landscape.

CDFW Jurisdiction

Features W1 through W8 have defined bed and banks or are basins/ponds. Only one feature—W4—is within the Project Footprint. Because CDFW does not differentiate lakes from smaller ponds, these basins are jurisdictional to CDFW. No riparian or wetland vegetation extended beyond the edges of the basins.

A Lake and Streambed Alteration Agreement from the CDFW would be obtained if these areas cannot be avoided and would be affected by the Project.

Threshold 4: Would the project 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?

No wildlife nursery sites are located within or in the vicinity of the Project Area and gen-tie line. In addition, all onsite aquatic features are ephemeral and isolated from other aquatic features. These features receive water only in response to rainfall or agricultural irrigation; therefore, there are no perennial aquatic features with offsite connectivity that could provide potential movement corridors for aquatic species.

Development of the Project, fencing installation, and activities associated with construction and operations/maintenance could potentially interfere with the movement of wildlife within, though, or adjacent to the Project Area. However, the Project Area is not located within or near any Natural Landscape Blocks or Essential Connectivity Areas. The Project Area does not contain or function as a wildlife movement corridor because it is heavily disturbed by agriculture, which has removed native habitat and limits opportunities for habitat continuity and wildlife movement; it does not contain wildlife travel routes (e.g., riparian strip, ridgeline, drainage, waterway) or wildlife crossings (e.g., tunnel, culvert, underpass) that connect open space areas; it does not provide connectivity between large areas of open space on a local or regional scale; and it does not contain suitable cover or forage to attract or support wildlife species. The Project Area is unlikely to provide a significant movement corridor for wildlife species; therefore, the Proposed Project would not significantly affect movement of wildlife species.

Security lighting that would be installed within the Project Area may affect movement of nocturnal wildlife within, though, or adjacent to the Project Area by deterring them from lighted areas. However, all lighting would comply with Fresno County Zoning Code 820.3.080 and would be directed downward and shielded

to minimize the potential for offsite glare or spillover, which would reduce potential impacts to wildlife movement; therefore, onsite lighting would not significantly impact movement of wildlife species.

Threshold 5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project has been designed to be consistent with the Open Space and Conservation Element of the Fresno County General Plan. In addition, the Project would implement Mitigation Measures BIO-1 through BIO-8 to reduce potential impacts to biological resources including special-status species. As such, no significant impacts would occur as a result of the Proposed Project.

Threshold 6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project Area is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As such, no impacts would occur as a result of the Proposed Project.

3.4.5 Mitigation Measures

BIO-1: To protect burrowing owl, the following conditions shall be met prior to construction:

- A focused avoidance (pre-construction) survey for burrowing owl presence, including existing potential burrows/surrogates and any new potential burrows/surrogates that may have become available, shall be conducted according to CDFW guidelines by a qualified biologist prior to initiating ground-disturbing activities. The survey shall be conducted no more than 14 days prior to the commencement of construction activities and shall occur within the Project Area and a 150-meter buffer, access permitting. The pre-construction survey would include visiting all potential burrows/surrogates during the timeframe of 2 hours before sunset to evening civil twilight or from morning civil twilight to 10:00 a.m., and would include protocol-level transects (i.e., 100 percent visual coverage) within the Project Area and 150-meter buffer.
- The burrowing owl pre-construction survey can be conducted in conjunction with other required preconstruction surveys if timing is appropriate.
- If construction activity halts for a period of 7 days or more, the survey shall be conducted again prior to the continuation of construction activities.
- A qualified biological monitor shall be present during initial ground-disturbing Project activities. If burrowing owl are detected during biological monitoring, all ground-disturbing activities shall halt immediately.
- If burrowing owl are detected within the Project Area or within the 150-meter buffer during the pre-construction survey or biological monitoring, buffers where no work would occur, as defined in the 2012 CDFW Staff Report, shall be established to

protect burrowing owl. Buffer size is dependent upon time of year and level of disturbance within the Project Area. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.

- If occupied burrow avoidance is infeasible during the non-breeding season, a qualified biologist shall implement a passive relocation program in accordance with the 2012 CDFW Staff Report. A Burrowing Owl Exclusion and Mitigation Plan and Mitigation Land Management Plan shall be prepared in accordance with the 2012 CDFW Staff Report and reviewed and approved by CDFW prior to passive relocation activities.

BIO-2: Any construction materials stored within the Project Area that could serve as a burrow surrogate for burrowing owl, such as sedentary aboveground pipes or riprap, shall be covered when not in use to avoid attracting burrowing owl to the site. The construction staff shall check the construction materials regularly when not in use to ensure they are sufficiently covered.

BIO-3: The results of the pre-construction surveys and any additional site visits/checks shall be documented in a report and submitted to Fresno County and CDFW.

BIO-4 If construction (i.e., equipment staging, vegetation removal, or ground disturbance) is scheduled to commence outside of the Swainson's hawk nesting season, no pre-construction surveys or additional measures are required for Swainson's hawk. During the breeding season (March 1 to September 15), a qualified biologist shall conduct pre-construction surveys of all potential nesting habitat within the Project Area. The survey shall focus on potential nest sites within the Project Area and a 0.5-mile buffer where access to neighboring properties is available or visible using a spotting scope or binoculars. Pre-construction surveys shall be conducted in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000) no more than 10 days prior to construction activities.

The surveying biologist must be qualified to determine the status and stage of nesting by Swainson's hawk without causing intrusive disturbance. If active Swainson's hawk nests are found, a 0.5-mile buffer shall be established by a qualified biologist around active nests and no construction within the buffer shall be allowed until the biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest), adult and juvenile Swainson's hawk have left the area, or the breeding season has ended. Encroachment into the buffer for Swainson's hawk must be authorized by the CDFW.

If an active Swainson's hawk nest is detected, and a 0.5-mile no-disturbance buffer is not feasible, consultation with the CDFW is recommended to determine how to avoid take. If take cannot be avoided, consultation with CDFW is required to obtain an Incidental Take Permit prior to ground disturbing activities.

BIO-5: Ground-disturbing and vegetation-removal activities shall be avoided during the general nesting bird season (February 1 to September 15). If these activities must occur during the

general nesting season, a pre-construction nesting bird survey shall be conducted by a qualified biologist on and within 500 feet of the construction area, access permitting. The survey shall be conducted no more than 10 days prior to initiation of these activities and repeated between delays of greater than 10 days during the nesting season.

If active nests are found, a qualified biologist shall routinely monitor nests once construction begins to detect behavioral changes resulting from the Project. If behavioral changes occur, the work causing that change shall cease and CDFW shall be consulted for additional avoidance and minimization measures.

If continuous monitoring is not feasible, a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors species shall be flagged around the nest (this distance may be modified by the qualified biologist based on the bird species found). No ground-disturbing or vegetation-removal activities shall occur within the buffer until the nesting season has ended or the nest is vacated, and juveniles have fledged, as determined by the qualified biologist. Buffer sizes may be modified or encroachment into the buffer may occur at the discretion of a qualified biologist and with notification to CDFW in advance of implementation.

BIO-6 A qualified biologist shall conduct a pre-construction den survey for San Joaquin kit fox no less than 14 days and no more than 30 days prior to any ground-disturbing and/or construction activities in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011). The survey shall be conducted within and adjacent to the construction area. The survey shall search for dens to ensure that San Joaquin kit fox is not present. If it is determined that the construction area is unsuitable for denning due to active agriculture or recent discing, then the survey is not required.

If an active San Joaquin kit fox den is observed within the construction area, the CDFW and USFWS shall be contacted prior to ground-disturbing activities within 200 feet of the den to determine the proper course of action. If San Joaquin kit fox activity is not detected, a memorandum shall be submitted to CDFW and USFWS within 5 days after the completion of the pre-construction survey and prior to the start of ground disturbance and/or construction activities. In addition, appropriate USFWS construction and ongoing operational requirements from the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) will be implemented.

If San Joaquin kit fox is detected onsite, consultation with USFWS/CDFW is recommended to determine how to avoid take. If take cannot be avoided, consultation with USFWS/CDFW is required to obtain an Incidental Take Permit prior to ground disturbing activities.

All perimeter fencing shall be raised 5 to 7 inches above ground level and knuckled under to allow San Joaquin kit fox movement through the Project Area.

BIO-7 All onsite construction workers shall attend training for special-status species prior to working within the Project Area. The training shall be conducted by a qualified biologist and shall include life history information, mitigation measures, and known locations or habitats on the site for special-status species. At a minimum, the training shall include the following species: burrowing owl, Swainson's hawk, American badger, San Joaquin kit fox, and other nesting raptors and birds. Educational materials shall also be available at the construction trailer in the form of species photos and/or handouts to serve as a reminder of the training for the workers

BIO-8 If construction activities must occur during the bat breeding periods from March through August, a qualified biologist shall conduct a pre-construction survey for roosting bats prior to any ground disturbance and/or construction activities. The survey shall be conducted within and adjacent to the construction area. All active bat maternity roosts shall be avoided during breeding periods and an appropriate no-work buffer shall be implemented based on the qualified biologist's best judgement regarding a necessary buffer for each observed bat species.

If active bat maternity roosts are found, a qualified biologist shall routinely monitor maternity roosts once construction begins to detect behavioral changes resulting from the Project. If behavioral changes occur, the work causing that change shall cease and CDFW shall be notified for additional avoidance and minimization measures.

If an active special-status bat maternity roost location is proposed to be disturbed, the qualified biologist shall consult with the CDFW and/or the USFWS to identify any additional necessary minimization measures to be implemented for Project activities.

3.4.6 Level of Significance After Mitigation

With the aforementioned mitigation measures incorporated, all of the Project impacts to biological resources would be less than significant.

3.5 Cultural Resources

3.5.1 Introduction

This section discusses the potential for the Project to affect cultural resources. This section also summarizes the results of a cultural resources assessment, including a records search, cultural resources survey of the Project Area, and a significance evaluation of identified resources.

According to Appendix G of the CEQA Guidelines, impacts to cultural resources would be considered significant if the Proposed Project would (1) cause a substantial adverse change in the significance of a historical resource; (2) cause a substantial adverse change in the significance of a unique archaeological resource; or (3) disturb any human remains, including those interred outside of dedicated cemeteries.

This analysis is based on the following technical document:

- Negative Phase I Archaeological Survey Report, San Luis West Solar Project (Tetra Tech 2025g; Appendix J).

3.5.2 Environmental Setting

The Project Area comprises a cultivated field in the San Joaquin Valley. The San Joaquin Valley is part of the larger Central Valley agricultural region of California. The Project Area is located to the east the Coastal Range and to the west of the Sierra Nevada Mountain Range.

The Central Valley is a forearc basin field with several thousand feet of sedimentary deposits that overlay Sierran basement rocks. The deposits within the Project Area consist of Quaternary (Late Holocene) Great Valley alluvium fan deposits of unconsolidated cobbles, gravel, and sand. The predominant soil series within the Project Area consist of Westhaven loam, clay loam, Excelsior sandy loam, and sandy substrates to depths of 72 inches.

The elevational range of the Project Area is approximately 325 to 340 feet above mean sea level. The Project Area is located in the San Joaquin River and Kings River watershed, approximately 7 to 8 miles north-northwest of the Tulare Lake Basin region and associated marshland and shoughs. The Tulare lake lakebed is a sink that was an extant lake in prehistory that is now dry due to runoff being diverted historically for agriculture.

3.5.3 Cultural Context

The cultural chronology of human occupation in the Central Valley is characterized by changing settlement and subsistence strategies in response to environmental conditions and available resources. Historically, the Project region population increased through the development of infrastructure (e.g., railroads) and economic resources (e.g., agriculture and ranching).

3.5.3.1 Pre-Contact Overview

No single cultural historical framework encompasses the entire pre-contact record of the Central Valley. The generalized cultural sequence includes the Paleo-Indian Period (13,500–10,500 calibrated years before present [cal B.P.]), Lower Archaic Period (10,500–7,500 cal B.P.), Middle Archaic Period (7,500–2,500 cal B.P.), Upper Archaic Period (2,500 cal B.P.–calibrated anno domini [cal A.D.] 1000), and Emergent Period (cal A.D. 1000–Historic).

Archaic Period

The Lower Archaic Period is characterized by isolated finds of stemmed points (similar to Borax Lake, Lake Mojave, Siler Lake, and Pinto wide stem types), stone crescents, and other distinctive, formalized, flaked stone artifacts (Rosenthal et al. 2007).

- The Middle Archaic climate was characterized by warmer and drier conditions facilitating the reduction or complete desiccation of Central Valley lakes. This period is categorized by projectile points such as notched, stemmed, thick-leaf, and narrow concave base darts, groundstone, pottery, twined basketry, basketry awls, and polished stone plummets. At this time, the classic Windmiller Pattern burial mounds occur. This pattern represents riverine adaptions that were permanent, year-round, habitation sites.
- The Upper Archaic climate was cooler and wetter. Populations were characterized by geographically complex sociopolitical organizations as evident from archaeological burial data (e.g., contrasting burial postures), artifact styles, and other items of material culture. Specialized technologies appeared during the Upper Archaic Period such as bone tools and implements and the production of saucer and saddle-shaped shell beads (Olivella) and ornaments (Haliotis), and ceremonial obsidian blades. This period was also marked by mortar and pestle use. Artifact assemblages from the period includes temporally diagnostic forms Olivella and Haliotis, charm stones (often found cached), cobble mortars, chisel ended pestles, and dart points. Other diagnostic artifacts include a wide array of bone tools including awls, fish spears, saws, and flake tools.

During the transition from the Upper Archaic Period to the Emergent Period, the Central Valley experienced drier conditions resulting in resource depression of valley and lowland resources. Native groups abandoned the valley floor and relocated to upland resource areas. As the climate improved, people expanded downslope again to the valley floor.

Emergent Period

- The Emergent Period is characterized by the appearance of bow and arrow technology, the rise of wealth-linked social status, the specialization of bead manufacturing, and increased social complexity as indicated by increased variation in burial types and furnishings. This period is also marked by the intensification of plant resources, and the use of the mortar and pestle. Artifact assemblages are characterized by small corner-notched and side-notched projectile points,

Olivella lipped and clam disc beads and bead drills, magnesite cylinders, hopper mortars, pottery, clay balls, and village sites with house pits (Rosenthal et al. 2007).

3.5.3.2 Ethnohistory

The Project Area is located within the ancestral lands of the Southern Valley Yokuts people, who spoke a branch of the Penutian (Yok-Utian) language family. The Yok-Utian language is divided into only two distinct subbranches: the Miwok-Costanoan and Yokuts.

The Yokuts fall into three geographical divisions, the Foothill Yokuts, Southern Valley Yokuts, and Northern Valley Yokuts. The Southern Valley Yokuts aboriginal lands extended within the upper end of the San Joaquin Valley, from the lower Kings River to the Tehachapi Mountains and encompassed Tulare, Buena Vista, and Kern lakes and their connecting sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern rivers. The Southern Valley Yokuts generally established villages on low, natural rises along lakes, major water courses, or tributaries. These water sources supported a large variety and abundance of natural floral, aquatic, and faunal resources.

Three Yokuts tribes inhabited the Tulare Lake Basin: the Tachi, the Wowol, and the Chunut. Tribal boundaries were fixed, but friendly relations prevailed between local groups, and the Tulare Lake tribes shared their abundant resources with outsiders. The current Project Area is located within the ancestral lands of the Tachi Tribe.

The Yokuts practiced a mixed economy of resource procurement and focused on fishing, hunting, fowling, and collecting freshwater shellfish as well as plant resources such as roots and seeds. The Yokuts were proficient fishers, implementing various strategies, such as nets, hooks, diving with nets, conical basketry traps, spears, two-prong harpoons, bow and arrow (albeit to a lesser extent), and the use of turkey mullein (*Eremocarpus setigerus*), a plant toxin that would stun fish and bring them to the surface. Seeds, roots, and grasses—such as tule, nutty roots, grassnuts, clover, fiddle-neck, and alfilaria—provided a large portion of the diet.

The family units of the Southern Valley Yokuts formed groups or triblets, averaging between 300 to 350 members living in villages. Residential areas were typically located upon raised elevations near resource and water sources, such as the Tulare Lake Basin, creeks, and river drainages. Villages were occupied most of the year until late spring when families would venture out for several months to collect seed-plant and other resources. The Southern Valley Yokuts were immensely involved in trading resources with neighboring tribes, trading items such as fish, seeds, baskets, and hides in exchange for other goods (e.g., obsidian, salt, etc.). Historic contact between the Southern Valley Yokuts and European immigrants took a devastating toll on the indigenous people, beginning with the Spanish in the 1770s. Military raids, disease, epidemics, and forced servitude claimed many indigenous lives during the Spanish, Mexican, and American periods.

In 1921, the Santa Rosa Rancheria was established on 40 acres of farmland in Lemoore, California. By 1980, the Santa Rosa Rancheria had 200 Tachi-Yokut tribal members and 170 acres of land. The Tachi-Yokut tribe is a state and federally recognized tribe. As of 2025, the Santa Rosa Rancheria has grown to include over 1,800 acres and has an active tribal government and programs.

3.5.4 Regulatory Setting

3.5.4.1 Federal

There are no applicable federal regulations for this issue area.

3.5.4.2 State

California Public Records Act

California Public Records Act Sections 6254(r) and 6254.10 were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public related to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission" (NAHC). Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency."

California Health and Safety Code, Sections 7050 and 7052

Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease, and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code Section 622.5

California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Public Resources Code Section 5097.5

Public Resources Code Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

3.5.4.3 Local

Fresno County General Plan

Fresno County's (County) General Plan Open Space and Conservation Element (OS), Historical, Cultural, and Geological Resources section contains several objectives and policies relevant to the preservation of cultural resources through development review, acquisition, encouragement of easements, coordination

with other agencies and groups, and other methods (Fresno County 2024). The applicable goals and policies include the following:

- *Goal OS-J:* To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment, and promote and encourage preservation, restoration, and rehabilitation of Fresno County's historically significant resources in order to promote historical awareness, community identify, and to recognize the County's valued assets that have contributed to past County events, trends, styles of architecture, and economy.
    - *Policy 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.
    - *Policy 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 implementation the recommendations of a historical resource's evaluation completed by qualified cultural resources practitioners.
    - *Policy 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 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 area, 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 OS-J.5: Archeological 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.
    - *Policy 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.

- *Policy 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).
- *Policy 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).
- *Policy 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.
- *Policy 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.

3.5.5 Impact Analysis

3.5.5.1 Methodology

To evaluate the Proposed Project's potential effects on significant archaeological and historic built environment resources, Tetra Tech conducted a cultural resources assessment of the Project Area that included a records search, a Sacred Lands File (SLF) search, and a cultural resources pedestrian survey (Tetra Tech 2025g).

Tetra Tech conducted the cultural resource records search through the California Historical Resources Information System (CHRIS) at the Southern San Joaquin Valley Information Center (SSJVIC), California State University, Bakersfield in November 2020, July 2022, and July 2023. The record search focused on the Project Area and a surrounding 1-mile buffer (search area).

Tetra Tech contacted the California NAHC on November 4, 2020 to request an SLF search. The NAHC responded on November 20, 2020, stating that its database did not identify Native American sacred lands within or near the Project Area.

Tetra Tech archeologists conducted an intensive pedestrian survey of the Project Area on April 19 to 22, 2020 and October 2 to 6, 2023. The team surveyed a total of 1,495 acres. The team was unable to survey 72.4 acres in the eastern portion of the Project Area because access was not granted due to heavy machinery working at that location; therefore, the team performed a visual reconnaissance of this area. The surveyed area consisted of an open tilled/disced field that lacked vegetation, and ground surface visibility was excellent (90 to 100 percent). The Project Area has been previously disturbed over several decades for agricultural use and the disturbance level is estimated at 2 to 3 feet in depth in the tilled agricultural areas (plow-zone) and leveled fields. The team surveyed an additional 42 acres on July 1, 14, and 16 2025 to address a small area added to the Project Area in October 2024; as such, the team surveyed a total of 1,537 acres.

The team defined sites as resources consisting of three or more pre-contact artifacts, or 10 or more historic artifacts likely to have been generated by a patterned cultural activity in a surface area reasonable to that activity (generally 30 meters). At the Field Director's discretion, the team also recorded single or multiple features without associated artifacts as sites. The team defined isolated finds as fewer than three pre-contact artifacts or fewer than 10 historic artifacts.

3.5.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to cultural resources would be considered significant if implementation of the Proposed Project would result in:

- a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.4;
- a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.4; or
- the disturbance of any human remains, including those interred outside of dedicated cemeteries.

3.5.5.3 Impact Discussion

Threshold 1: Would the project cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5?

The results of the CHRIS records search indicated that seven previous cultural resources studies have been conducted within the Project Area. Additionally, the records search and cultural resources pedestrian survey identified the presence of one previously recorded cultural resource (P-10-006640) in the northwestern portion of the Project Area, outside of the area of direct impact. Resource P-10-006640 is not eligible for listing in the California Register of Historical Resources and does not qualify as a Historical Resource, as defined in CEQA Guidelines Section 15064.5. The records search identified three previously recorded built environment historical resources within 1 mile of the Project Area; however, none of these resources are located within the Project Area.

Subsurface deposits across the Project Area consist of Late Holocene (approximately 4000 to 150 B.P.) alluvium fan deposits. These deposits are generally considered to have the potential to contain buried archaeological resources depending upon the likelihood of past human activity in the area; therefore, there is an overall low sensitivity for buried subsurface archaeological resources that qualify as historical resources to exist within the Project Area. Unknown subsurface cultural resources qualifying as historical resources could be encountered because the Proposed Project includes subsurface excavation up to depths of approximately 10 feet. As such, impacts to unknown cultural resources that could qualify as significant historical resources would be mitigated to less than significant through the implementation of Mitigation Measures CUL-1 through CUL-3, which require cultural resources sensitivity training for construction workers, archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction.

Threshold 2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

The CHRIS records search and field survey did not identify archaeological sites within the Project Area, and—as discussed above—the Proposed Project has a low potential to affect previously unknown, buried archaeological deposits; however, because the Proposed Project includes ground disturbance, unknown archaeological resources could be unearthed, and significant impacts could occur if such resources are discovered during Project construction. As such, potential impacts would be reduced to less than significant with implementation of Mitigation Measures CUL-1 through CUL-3, which require cultural resources sensitivity training for construction workers, archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction.

Threshold 3: Would the project disturb human remains, including those interred outside of formal cemeteries?

Neither the records research results nor the cultural resources survey indicate that any particular location within the Project Area has been used for human burial purposes in the recent or distant past; however, if human remains are inadvertently discovered during Project construction activities, such remains could be damaged or disturbed, which would constitute a significant impact. As such, implementation of Mitigation Measure CUL-4 would ensure that any human remains encountered during Proposed Project implementation would be properly treated, thus reducing impacts to a less-than-significant level.

3.5.6 Mitigation Measures

CUL-1: **Cultural Resource Worker Education/Training.** Prior to Project construction-related, ground-disturbing activities (e.g., vegetation removal, excavation, trenching, and grading), the Project Proponent shall conduct a cultural resources worker environmental awareness program for Project construction personnel. A Secretary of the Interior-qualified archaeologist shall be retained for the Project and shall prepare the initial cultural resource briefing of the worker environmental awareness program prior to ground-disturbing activities. During construction, the Project Proponent shall provide the training to all new construction personnel. The local Native American tribal representative(s) shall be invited to participate in the worker training, if requested. The cultural resource training shall include:

- an overview of applicable laws and penalties pertaining to disturbing cultural resources;
- a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area;
- types of cultural resources found in the area,
- instruction that Project workers shall halt construction if a cultural resource is inadvertently discovered during construction; and

- procedures to follow if an inadvertent discovery is encountered (Inadvertent Discovery Plan discussed below), including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs).

CUL-2: **Cultural Resource Monitoring.** Prior to ground-disturbing construction activities, the Project Applicant shall retain a Secretary of the Interior-qualified Project archaeologist to prepare and implement a Cultural Resource Monitoring Plan (Plan or Monitoring Plan) that shall outline the procedures for monitoring. The qualified Project archaeologist shall also coordinate and schedule Project archaeological and local Native American (as applicable) monitors during Project construction. The Plan shall be submitted to the County for review and approval.

The Plan shall include (but not be limited to) the following:

- identification of qualified monitors;
- monitor responsibility and daily reporting;
- schedules;
- applicable laws;
- inadvertent discovery procedures (see CUL-3 below);
- monitoring frequency; and
- final reporting at the completion of the Project.

The report shall be submitted to the County and the Southern SSJVIC.

CUL-3: **Inadvertent Discovery of Archaeological Resources During Construction.** A Secretary of the Interior-qualified Project archaeologist shall prepare an Inadvertent Discovery Plan as part of the Monitoring Plan for the Project. The local Native American tribal representative(s) shall be invited to participate in drafting any tribal cultural resources protocols for the Inadvertent Discovery Plan, if requested.

The Inadvertent Discovery Plan shall provide protocols and notification procedures in the event of an inadvertent discovery. If subsurface archaeological resources are discovered during Project construction (e.g., ground-disturbing activities such as vegetation removal, excavation, trenching, and grading), all ground-disturbing activities within 50 feet of the find shall cease and the qualified Project archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the qualified Project archaeologist shall determine appropriate avoidance measures or other appropriate mitigation in consultation with the implementing agencies and any local consulting Native American groups expressing interest. Under CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided,

the qualified Project archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local consulting Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in CEQA Guidelines Section 21083.2, the site shall be treated in accordance with the provisions of CEQA Guidelines Section 21083.2

CUL-4: **Discovery of Human Remains.** If human remains are uncovered during Project construction, the Project contractor shall immediately halt work within 100 feet of the find, contact the Fresno County Coroner to evaluate the remains, and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.5(e)(1). If the County Coroner determines that the remains are Native American, they shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5(c) and Public Resources Code 5097.98 (as amended by Assembly Bill 2641).

The Native American Heritage Commission shall designate a most likely descendant for the remains per Public Resources Code 5097.98, which states:

> ...the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendant regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

If the remains are determined to be neither of forensic value to the Coroner nor of Native American origin, provisions of the California Health and Safety Code (7100 et seq.) directing identification of the next-of-kin shall apply.

3.5.7 Level of Significance after Mitigation

Project-related impacts to cultural resources would be less than significant.

3.6 Energy

3.6.1 Introduction

This section discusses the energy implications of the Proposed Project, including electricity- and transportation-related energy (petroleum-based fuels). Impacts to energy are considered significant if the Proposed Project would (1) result in the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or (2) conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The energy calculations used for this analysis are based on the outputs discussed in the following technical document:

- Air Quality and Greenhouse Gas Technical Report, San Luis West Solar Project (Tetra Tech 2025c; Appendix F).

3.6.2 Environmental Setting

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (California Energy Commission [CEC] 2021).

3.6.2.1 Electricity

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). One watt-hour is equivalent to one watt of power used for 1 hour. On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is 1 billion watt-hours.

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. According to the U.S. Energy Information Administration (EIA), in 2022 California used approximately 251,869 GWh of electricity (EIA 2023). In 2023, in-state utility-scale electricity generation equaled about 90 percent of California's electricity sales, and the rest of the State's power supply came from out of state (EIA 2024). Of California's electricity sales in 2023, 47 percent came from the commercial sector; 35 percent from the residential sector; 18 percent from the industrial sector; and less than 0.3 percent from light rail, subways, and the iconic cable cars in the transportation sector (EIA 2024).

Within Fresno County, in 2022, the residential sector accounted for 3,170 GWh of electricity consumption and the non-residential sector accounted for 5,214 GWh of electricity consumption, totaling 8,384 GWh of electricity consumption (CEC 2024a).

Pacific Gas & Electric Company (PG&E) is an investor-owned utility company that provides electricity and natural gas services to approximately 16 million people throughout a 70,000-square-mile service area in Northern and Central California, including most of Fresno County and the Project Area (PG&E 2024).

3.6.2.2 Transportation

Overall, the transportation sector accounts for two-fifths of the state end-use energy consumption (EIA 2024). In 2023, California consumed 13.5 billion gallons of gasoline and 3 billion gallons of diesel fuel (California Department of Tax and Fee Administration 2024a and 2024b). Petroleum-based fuels currently account for approximately 92 percent of California's transportation fuel use (CEC 2022). However, the State has implemented several policies and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gases (GHGs) from the transportation sector, and reduce vehicle miles traveled. Due to these regulations, the demand for gasoline will continue to decline over the next 10 years, and there will be an increase in alternative fuel use. According to the CEC, Fresno County on-road transportation sources consumed approximately 371 million gallons of gasoline and 85 million gallons of diesel fuel in 2022 (CEC 2024b).

3.6.2.3 Natural Gas

Natural gas is measured in terms of cubic feet (cf) or British thermal units. Natural gas provides approximately one third of the State's total energy requirements. According to the EIA, California used approximately 2,059 billion cf of natural gas in 2022 (EIA 2024). California imports 90 percent of its supply of natural gas (EIA 2024).

PG&E is a provider for the area near the Project; however, there is no known natural gas service for the Project Area.

3.6.3 Regulatory Setting

3.6.3.1 Federal

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the *maximum feasible level* with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through

2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.

In September 2019, USEPA finalized the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program and announced its decision to withdraw the Clean Air Act Preemption waiver granted to the State of California in 2013. However, on March 9, 2022, the USEPA reinstated California's authority under the Clean Air Act to implement its own greenhouse gas emission standards for cars and light trucks, and zero emission vehicle sales mandate.

Energy Policy Act of 2005

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

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The act included the first increase in fuel economy standards for passenger cars since 1975 and included a new energy grant program for use by local governments in implemented energy-efficiency initiatives, as well as a variety of green building incentives and programs.

3.6.3.2 State

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the California Public Utilities Commission (CPUC). The CEC regulations do the following:

- Establish a standard for baseload generation owned by, or under long-term contract, to publicly owned utilities of 1,100 pounds of carbon dioxide (CO_2) per MWh. This encourages the development of power plants that meet California's growing energy needs while minimizing their GHG emissions.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This facilitates public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the State's standards for environmental impact.

- Establish a public process for determining the compliance of proposed investments with the emissions performance standard.

Senate Bill 1389

Senate Bill 1389 (Public Resources Code [PRC] Sections 25300–25323) requires the CEC to prepare a biennial Integrated Energy Policy Report that assesses major energy trends and issues facing the California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (PRC Section 25301(a)).

Executive Order B-30-15; Senate Bill 100 and 350

In April 2015, the Governor issued Executive Order B-30-15, which established a GHG reduction target of 40 percent below 1990 levels by 2030. SB 350 (Chapter 547, Statutes of 2015) advanced these goals through two measures. First, the law increases the renewable power goal from 33 percent renewables by 2020 to 50 percent by 2030. Second, the law requires the CEC to establish annual targets to double energy efficiency in buildings by 2030. The law also requires the CPUC to direct electric utilities to establish annual efficiency targets and implement demand-reduction measures to achieve this goal. In 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Assembly Bill 1493

In response to the transportation sector accounting for more than half of California's CO_2 emissions, Assembly Bill (AB) 1493, enacted in 2002, requires California Air Resources Board (CARB) to set GHG emission standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009 to 2016 and Phase II established standards for model years 2017 to 2025.

Assembly Bill 32 (2006) and Senate Bill (2016)

California's major initiative for reducing GHG emissions is outlined in AB 32, the *California Global Warming Solutions Act of 2006*. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05) and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Reductions in overall energy consumption have been implemented to reduce emissions.

In September 2016, the Governor signed SB 32, which builds on AB 32 and requires the state to cut GHG emissions to 40 percent. With SB 32, the Legislature also passed AB 197, which provides additional direction for updating the Scoping Plan to meet the 2030 GHG reduction target codified in SB 32.

During June 2021, CARB in collaboration with other State agencies, held a three-day public workshop series to initiate the development of the update to the AB 32 Climate Change Scoping Plan, which will reflect California's goal to achieve carbon neutrality by 2045. Part of the effort in meeting California's long-term reduction goals include reducing petroleum use in cars and trucks by 50 percent, increasing from one-third to more than one-half of California's electricity derived from renewable sources, doubling the efficiency savings achieved at existing buildings and making heating fuels cleaner; reducing the release of methane, black carbon, and other short-lived climate pollutants, and managing farm and rangelands, forests, and wetlands so they can store carbon.

California's Renewables Portfolio Standard

First established in 2002 under SB 1078, California's Renewables Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent by 2020 and 50 percent by 2030. In 2018, SB 100 further increased California's RPS and required retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

The CPUC and the CEC jointly implement the RPS program. The CPUC's responsibilities include (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS) was established in 2007 through Executive Order S-1-07 and is administered by CARB. It requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with 0.25 percent in 2011 and culminating in a 10 percent total reduction in 2020. Petroleum importers, refiners, and wholesalers can either develop their own low carbon fuel products or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.

Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012. The program requires a greater number of zero-emissions vehicle models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero Emission Vehicle (ZEV) regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles between 2018 and 2025. The increase in low- and zero-emissions vehicles will result in a decrease in the consumption of non-renewable fuels such as gasoline and diesel.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

In 2008, CARB approved the Truck and Bus regulation to reduce NO_X, coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) emissions from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation will be fully implemented by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets. While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

3.6.3.3 Local

Fresno County Solar Facility Guidelines

The Fresno County Board of Supervisors has adopted Solar Facility Guidelines that provide general guidelines and policies, as well as an outline for the process of evaluating solar facilities within Fresno County. The Solar Facility Guidelines were revised in December 2017. The overall goal of the Solar Facility Guidelines is to accommodate new renewable energy technology while protecting important farmlands and minimizing impacts to existing agricultural operations.

3.6.4 Impact Analysis

3.6.4.1 Methodology

Detailed energy calculations are based on the air quality outputs provided in the *Air Quality and Greenhouse Gas Technical Report* (Tetra Tech 2025c; Appendix F).

3.6.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, energy impacts are considered significant if implementation of the Proposed Project would:

- result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency

3.6.4.3 Impact Discussion

Threshold 1: Would the proposed project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The impact analysis focuses on the sources of energy that are relevant to the Proposed Project: electricity, the equipment-fuel necessary for Project construction and decommissioning, and the automotive fuel necessary for Project operations. Construction of the Proposed Project would not involve natural gas consumption. There are no established state or local thresholds of significance for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project.

Construction

Construction and decommissioning of the new solar energy generation facility is expected to require the use of non-renewable resources such as gasoline and diesel to power off-road construction equipment and on-road vehicles as well as electricity consumed from water pumping during construction. As noted above, construction of the Proposed Project would not result in any natural gas consumption. Therefore, the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of natural gas, and impacts would be less than significant.

The onsite construction workforce is expected to peak at several hundred individuals who will be onsite at any given time. It is anticipated that most workers would commute to the site from nearby communities such as Huron, Coalinga, Lemoore, Visalia and other locales within commuting distance to the Project Area. Workers would reach the site using existing roads. Carpooling to the site will be encouraged, and therefore actual worker trips will be less than peak Projected trips.

Construction of the Proposed Project would utilize fuel-efficient trucks and equipment consistent with federal and State regulations, such as fuel efficiency regulations in accordance with CARB's Pavley Phase I

and II standards, the anti-idling regulation in accordance with 13 CCR Section 2485, and fuel requirements in accordance with 17 CCR Section 93115, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation (CARB 2017). The Project would comply with the construction equipment idling restrictions outlined in 13 CCR Section 2449 et seq. Additionally, compliance with Title 13 would also help to reduce unnecessary fuel consumption during Project construction.

The Proposed Project would comply with State measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation and construction fuels. While these regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines. Therefore, impacts would be less than significant.

Operation

Operational energy consumption in the form of electricity use would occur as a result of operation of the facilities and substation, operation of the Battery Energy Storage System, solar panel maintenance, and pumping of groundwater. However, the proposed solar panels would generate up to 171,500,000 kWh of electricity annually and offset onsite operational electricity use. This production is anticipated to remain relatively constant throughout Project operation. This electricity generation would assist State investor-owned utilities in meeting their obligations under State RPS guidelines by providing a renewable energy alternative to the utilities' existing power mix. In addition, operation of the Proposed Project would not result in any natural gas consumption. Therefore, the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of electricity or natural gas. Impacts would be less than significant.

In addition, transportation fuel use would be minimal and is predominately associated with worker commute trips, trucks, off-road equipment, and panel washing activities. Trips to the Project Area would be minimal and panel cleaning would happen periodically. The Proposed Project would comply with CAFE standards, which would result in more efficient use of transportation fuels (lower consumption). Project-related vehicle trips would also comply with Pavley Standards, which are designed to reduce vehicle GHG emissions by mandating increasingly stringent emissions standards on new vehicles but would also result in fuel savings from more efficient engines in addition to compliance with CAFE standards. Based on the minimal number of trips, the negligible fuel use, and the cleaning of panels on an as-needed basis, the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of transportation fuels. Impacts would be less than significant.

Threshold 2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction

Construction equipment would comply with federal, State, and regional requirements where applicable. With respect to truck fleet operators, the USEPA and National Highway Traffic Safety Administration have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for

model years 2014 through 2018. Depending on the vehicle type, these standards result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline. The Phase 2 heavy-duty truck standards cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type. The energy modeling for trucks does not consider specific fuel reductions from these regulations, since they would apply to fleets newer trucks meeting the regulatory standards are incorporated. However, as older trucks are replaced with newer models that meet the standards, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy.

Per CEQA Guidelines Appendix F, the Proposed Project's construction equipment used would be consistent with the energy standards applicable to construction equipment including limiting idling fuel consumption and using contractors that comply with applicable CARB regulatory standards that affect energy efficiency. Therefore, the Proposed Project would comply with existing energy standards.

Impacts would be less than significant.

Operation

The Climate Change Scoping Plan (CARB 2017) relies on achievement of the 50 percent RPS by 2030 to meet the AB 32 GHG emissions reduction mandate. The Proposed Project and other similar projects are essential to achieving the RPS. The Proposed Project is reasonably expected to displace region-wide and statewide emissions of GHGs over the expected life of the Project. The GHG emission reduction is a direct result of increasing the share of renewable energy available to investor-owned utilities required to meet RPS. The Project would directly align with the goals of RPS by generating approximately 171,500,000 kWh of renewable electricity annually.

Furthermore, the Proposed Project would be consistent with the Attorney General's recommended measures to reduce GHG emissions. Since the Proposed Project would have an electric power generating capacity of approximately 125 MW (alternating current or "AC") of renewable electrical energy and up to 30 MW of battery storage, it complies with the Attorney General's Recommended Measure to "install solar and wind power systems, solar and tank less hot water heaters, and energy-efficient heating ventilation and air conditioning." The Project is below regional regulatory thresholds and could result in a reduction of GHG emissions; therefore, impacts would be less than significant.

The Project's main objectives are to assist California Investor-Owned utilities in meeting their obligations under the State's RPS Program and assist the State in meeting the AB-32 GHG emissions reduction goal of 40 percent below 1990 levels by 2030. The Project would assist the State and regulated utility providers to generate a greater portion of energy from renewable sources consistent with the 2030 RPS. The Project

would be compliant with the applicable recommended actions of the CARB Climate Change Scoping Plan, as well as applicable federal, state, and local policies.

Impacts would be less than significant.

3.6.5 Mitigation Measures

No mitigation is required.

3.6.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.7 Geology and Soils

This section discusses the potential environmental effects of the Proposed Project related to geology and soils. Impacts to geology and soils are considered significant if the Proposed Project would (1) directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, or landslides; (2) result in substantial soil erosion or the loss of topsoil; (3) 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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse; (4) be located on expansive soil; (5) 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; or (5) directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The analysis is based on the following technical document included as an appendix:

- Geology and Soils Report, San Luis West Solar Project (Tetra Tech 2025h; Appendix K).

3.7.1 Introduction

3.7.2 Environmental Setting

3.7.2.1 Geomorphic Setting

The Project Area is in the southern half of the Great Valley Geomorphic Province (Great Valley Province), along its western edge where it adjoins the Coastal Ranges Geomorphic Province. The Great Valley province is a broad, flat, alluvial plain approximately 50 miles wide and 400 miles long in the central part of California. The geology is relatively simple within the Great Valley Province, with the with thick sequences of alluvial sediment extending to depths of 1,000 to 2,000 feet deep and forming the broad flat surface of the central valley, and limited potential for hazards related to its physical setting (e.g., landslides, earthquakes, and significant surface erosion).

The Great Valley is a broad alluvial plain spanning from Bakersfield to Sacramento. The valley is underlain by significant thicknesses of alluvial deposits that date from the Jurassic to the Quaternary periods. These deposits can be over 2,000 feet thick, with much of the older deposits transformed into sedimentary rock. The sediments were derived from erosion of the adjacent mountains and deposited primarily through alluvial transport (California Geological Survey [CGS] 2002). Due to its location near the western edge of the Great Valley, the sediments underlying the Project Area have been derived primarily from eroded materials of the Coast Ranges that have been carried east by surface waters and deposited in the Great Valley. The Project Area is very flat, with a gentle (less than 0.5 percent) slope generally to the east, with elevations ranging from approximately 410 feet above sea level on the western portion to approximately 330 feet above sea level on the eastern portion. No natural drainage courses traverse the Project Area and the nearest established channel, Los Gatos Creek, is located approximately 1.1 miles northwest of the

Project Area. Los Gatos Creek drains to a small area of the Coast Ranges and flows east through Coalinga before turning northeast into the San Joaquin Valley.

3.7.2.2 Local Geology

The Project Area sits on Quaternary alluvium, which is likely to extend to a depth of at least 15 feet below the ground surface (Terracon Consultants, Inc. [Terracon] 2019). To the west and southwest of the site are sedimentary rocks of Pleistocene to Pliocene age, while to the south and southeast are marine sedimentary rocks of Pleistocene to Pliocene age. Many of these older sedimentary rocks are covered by Quaternary alluvium that thins toward the west. The area immediately surrounding the Project Area is very flat and gently sloping to the east (Terracon 2019).

3.7.2.3 Regional Seismicity and Fault Zones

An *active fault*, according to California Department of Conservation, Division of Mines and Geology, is a fault that has indicated surface displacement within the last 11,000 years. A fault that has not shown geologic evidence of surface displacement in the last 11,000 years is considered *inactive*.

The Central Valley has a relatively low seismic activity level, with the few active faults mapped within it generally occurring along the boundaries with adjoining geomorphic provinces. The Alquist-Priolo Earthquake Fault Zoning Act of 1972 provides information on areas with active faults that could pose risks to new development or existing infrastructure. Areas along and adjacent to active faults require further evaluation to determine specific risks and development requirements to reduce or eliminate the risks. There are two such zones in the mountains of the Coast Ranges to the west of the area: the Nuñez Fault Zone, which extends approximately 3 miles in length, and the San Andreas Fault Zone, which extends the entire length of California. The Nuñez Fault Zone is located approximately 20 miles west-northwest of the Project Area, while the closest point of the San Andreas Fault Zone is located approximately 26 miles southwest (CGS 2024). The areas immediately surrounding the Project Area are classified as *unevaluated* and do not include any zones identified as requiring special studies (CGS 2024).

Scientists from the USGS's CGS, and other organizations have developed a model to predict the likelihood of earthquakes on various faults and portions of fault zones throughout the state (Field et al 2015). The model, known as the Uniform California Earthquake Rupture Forecast provides probabilities of an earthquake of various magnitudes for several faults that are not yet identified under the Alquist-Priolo program. Table 3.7-1 presents the range of probabilities for an earthquake at or above a specific magnitude occurring on the various segments of these fault zones.

Table 3.7-1. Earthquake Probabilities				
Fault Zone	**Distance (miles)**	**Probability of an Earthquake in the next 30 years (Richter-Scale Magnitude)**		
		≥ 6.7	**≥ 7.0**	**≥ 7.5**
Great Valley 12	19.0	0.52% – 0.63%	0.38% – 0.40%	0.14%
Great Valley 13 (Coalinga)	0.65	0.50% – 0.61%	0.41% – 0.47%	0.14%
Great Valley 14 (Kettleman Hills)	0.31	0.50%	0.37%	0.14%
Lost Hills	25.0	0.84% – 0.88%	—	—
San Andreas (Creeping section)	26.5	8.09% – 13.23%	7.92% – 13.05%	6.94% – 8.98%
San Andreas (Parkfield section)	24.2	13.44% – 16.88%	13.33% – 16.73%	10.19% – 12.41%
San Andreas (Cholame section)	27.8	18.92% – 21.52%	18.73% – 21.27%	13.63% – 15.70%
San Juan	27.0	0.41% – 0.50%	0.31% – 0.40%	0.03% – 0.05%

Source: Field et al. 2015

Areas closest to the San Andreas Fault Zone have a relatively high likelihood (8 to 21 percent) of a significant earthquake occurring within the next 30 years. The rest of the faults have a very small likelihood (less than 1 percent) of a high magnitude earthquake occurring within the same time period.

3.7.2.4 Soils

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, four soil series are identified within the Project Area, including Kimberlina sandy loam, 0 to 2 percent slopes; Excelsior sandy loam, 0 to 2 percent slopes; Excelsior sandy loam, sandy substratum, 0 to 2 percent slopes; and Westhaven loam, 0 to 2 percent slopes (Figure 3.7-1) (NRCS 2024). Table 3.7-2 provides a description of each soil series.

The four soil series are considered to have a loam texture (well-represented mixtures of sand, silt, and clay particle sizes). Three of the soil series are classified as sandy loam, clay loam, and loam. Only the Excelsior Sandy Loam (445) has been given a hydric rating but without any specific hydric criteria. All of these soils are considered moderately susceptible to water erosion, while the Kimberlina and Excelsior series are considered slightly more susceptible to wind erosion than the Westhaven series.

Table 3.7-2. Soil Series within the Project Area

ID	Soil Series	% of Project Area	Description	Water Erodibility*		Wind Erodibility**	
				Kw	Kf	Group	Index
425	Kimberlina sandy loam, 0 to 2 percent slopes	14	This series consists of very deep, well-drained soils on alluvial fans. These soils formed in alluvium derived from calcareous sedimentary rock and are more than 60 inches deep. The content of organic matter is less than 1% and decreases regularly with depth. The content of gravel ranges from 0 to 10%.	0.32	0.32	3	86
445	Excelsior sandy loam, 0 to 2 percent slopes	3	This series consists of very deep, well-drained soils on alluvial fans. These soils formed in alluvium derived from calcareous sedimentary rock and are more than 60 inches deep. The content of organic matter is less than 1% at the surface and decreases irregularly with increasing depth. Texture is loamy sand or sandy loam. The content of clay ranges from 3 to 18%. The loamy sand phase is eroded.	0.28	0.28	3	86
447	Excelsior sandy loam, sandy substratum, 0 to 2 percent slopes	13		0.28	0.28	3	86
474	Westhaven loam, 0 to 2 percent slopes	70	This series consists of very deep, well-drained soils on alluvial fans. These soils formed in alluvium derived dominantly from calcareous sedimentary rock and are more than 60 inches deep. The content of organic matter is less than 1% below the Ap horizon and decreases irregularly with depth. The particle-size control section averages 18 to 35% clay. By weighted average, less than 15% of the particles are fine sand or coarser between depths of 10 to 40 inches.	0.37	0.37	6	48

Table 3.7-2. Soil Series within the Project Area

ID	Soil Series	% of Project Area	Description	Water Erodibility*		Wind Erodibility**	
				Kw	Kf	Group	Index

Notes:

* Erosion factors include the K factor (Kw and Kf); these indicate the susceptibility of a soil to sheet and rill erosion by water. Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments. Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size. Factor K is one of six factors used in the Universal Soil Loss Equation and the Revised Universal Soil Loss Equation to predict average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

** Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. Group 1 soils are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Source: Natural Resources Conservation Service 2024

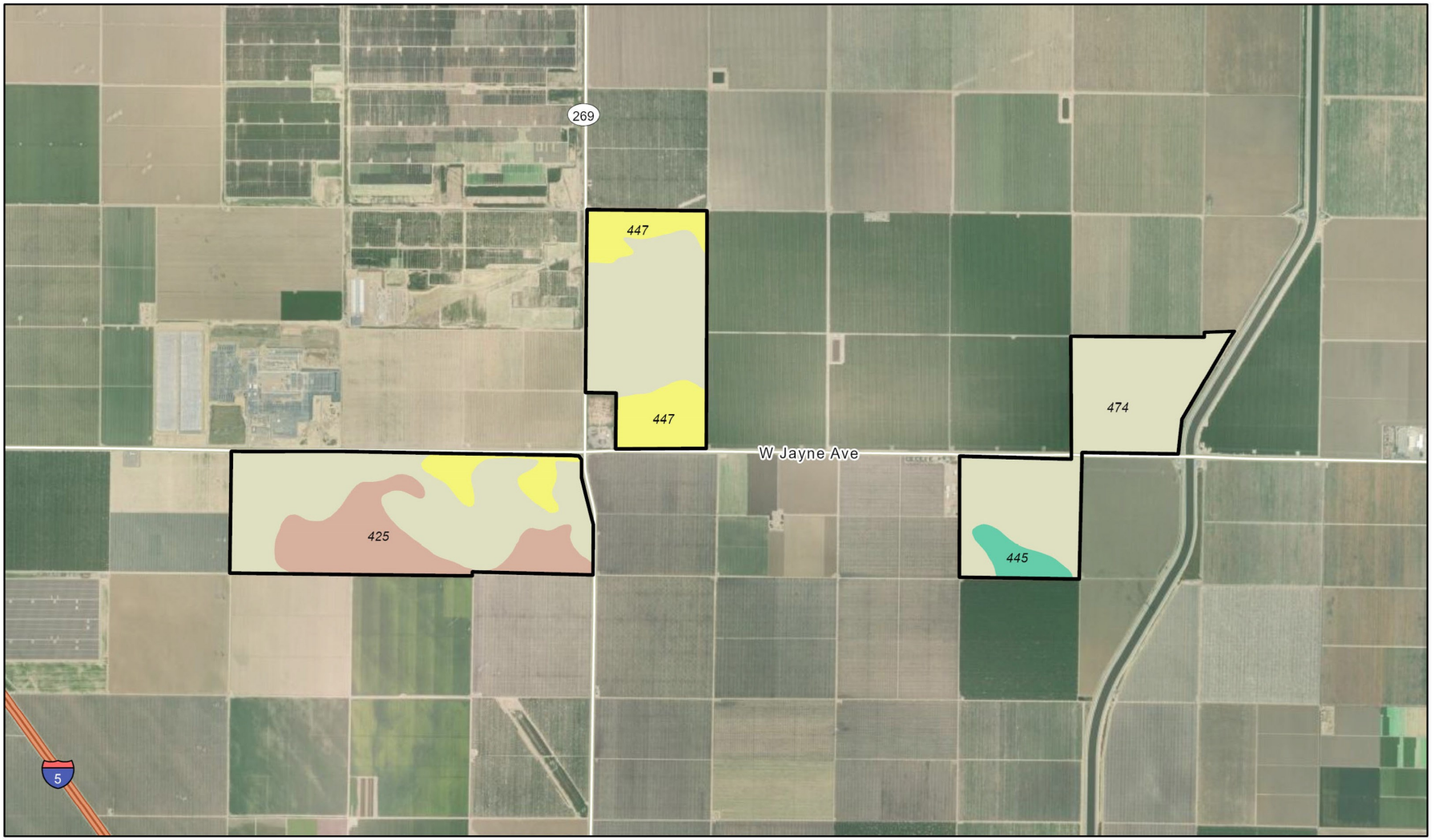

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Figure 3.7-1. Soils

2024-137 SLW Solar + BESS

Subsurface Observation

A site-specific preliminary field geotechnical investigation for the Proposed Project provides local, subsurface details of the soil materials for the Project's three subareas. Westwood (2024) drilled 18 boreholes in the Project Area, six in each of the three subareas. These boreholes were placed predominantly in areas of Westhaven loam, 0 to 2 percent slopes soil and extended to depths between 17.5 feet and 21.5 feet, except one which was extended to a depth of 51.5 feet below the ground surface. At these depths, the subsurface investigation extended well below the zone of agrarian soil development (about 60 inches) and into the underlying geologic stratigraphy (parent material). Three textural units were identified in these boreholes, the latter two were found at multiple levels within the boreholes (Tetra Tech 2025h):

- *Unit 1 - Topsoil or Tilled Zone*: Loose, surficial topsoil and tilled soil measured between 6 and 12 inches. Generally dark yellowish brown to gray, moist, sandy and clayey, and contained trace roots.
- *Unit 2 - CLAYS: Lean Clay (CL), Sandy Lean Clay (CL), Sandy Silty Clay (CL-ML)*. Primary texture onsite; lean clay with varying amounts of sand and silt. Typically exhibited various shades of brown, was dry to moist, and varied in density from soft to very stiff. This unit was found in layers at depths up to 45 feet.
- *Unit 3 - SANDS: Poorly Graded Sand with Clay (SP), Clayey Sand (SC), Silty Sand (SM), Silty Clayey Sand (SM-SC)*. Interbedded within Unit 2 and contained variable amounts of clay and silt. Typically exhibited various shades of light brown to gray, was dry to moist, and had a very loose to medium density. It was found in layers at depths up to 51.5 feet. This unit also showed weak calcareous cementation interspersed throughout. No groundwater was encountered in any borehole to its maximum depth, and the depth to groundwater for this general area was noted as greater than 500 feet below the ground surface (Westwood 2024).

3.7.2.5 Paleontological Resources

A paleontological resources technical report was prepared in 2020 for Orchard Substation, located immediately north of the westernmost portion of the Project Area (Assessor's Parcel Number 085-050-01S). The report was prepared by the San Diego Natural History Museum Department of PaleoServices (McComas and Deméré 2020). The report was based on a desktop evaluation of the local geology (at or near the surface) and previously identified paleontological resources in the vicinity.

The literature search assisted with matching the geologic history of the surrounding area with the types of fossils potentially found within specific geologic units. This aids in predicting the likelihood of finding paleontological resources based on the units found at the Orchard Substation site. The geologic unit found at the surface of the Orchard Substation is characterized as Holocene-age surficial sediments. This is underlain by Pleistocene-age sediments that McComas and Deméré (2020) conservatively estimated at a depth of no less than 15 feet below the ground surface. Based on the likelihood of finding paleontological resources in each unit, the Holocene-age unit was judged to have *Low* paleontological potential while the Pleistocene-age unit was judged to have *Undetermined* paleontological potential.

The comparison between the Orchard Substation site and the Project Area is strong. Both are located on the Holocene-age unit, and both are expected to have Pleistocene-age sediments underlying this unit at depths no less than 15 feet below ground surface.

3.7.3 Regulatory Setting

3.7.3.1 Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the Proposed Project would be required to adhere.

3.7.3.2 State

The Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates the development and construction of buildings intended for human occupancy to avoid hazards associated with surface fault rupture. In accordance with this law, the CGS maps active faults and designates Earthquake Fault Zones along mapped faults. This act groups faults into categories (i.e., active, potentially active, or inactive). Historic and Holocene faults are considered active; Late Quaternary and Quaternary faults are considered potentially active; and pre-Quaternary faults are considered inactive. These classifications are qualified by conditions. For example, a fault must be shown to be *sufficiently active* and *well defined* through detailed site-specific geologic explorations to determine whether building setbacks should be established. Any project that involves the construction of buildings or structures for human occupancy, such as an operations and maintenance building, is subject to review under the Alquist-Priolo Earthquake Fault Zoning Act, and any structures for human occupancy must be located at least 50 feet from any active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate *zones of required investigation* (i.e., seismic hazard zones) where site investigations are required to determine the need for mitigation of potential liquefaction, earthquake-induced landslides, or ground displacements.

3.7.3.3 Local

Fresno County General Plan

The following goals and policies from the Fresno County 2024 General Plan pertain to geology and soils that are applicable to the proposed Project.

- *Goal HS-D:* To minimize the loss of life, injury, and property damage due to seismic and geologic hazards.
    - *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 Uniform Building Code (Title 24 of the California Code of Regulations [CCR]) 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 CCR have been satisfied.

- *Policy HS-D.6: Seismic Standards for Critical Facilities.* The County shall ensure compliance with State seismic and building standards in the evaluation, design, and siting of critical facilities, including police and fire stations, school facilities, hospitals, hazardous material manufacture and storage facilities, bridges, large public assembly halls, and other structures subject to special seismic safety design requirements.
- *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.

- *Goal OS-J:* To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment and promote and encourage preservation, restoration, and rehabilitation of Fresno County's historically significant resources in order to promote historical awareness, community identify, and to recognize the county's valued assets that have contributed to past county events, trends, styles of architecture, and economy.
  - *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, paleontological, and cultural sites and their contributing environment from damage, destruction, and abuse to the maximum extent feasible. Project-level mitigation shall include accurate site surveys, consideration of project alternatives to preserve archeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable.

Fresno County Grading Ordinance (Section 7002)

Section 7002 of the County's Grading Ordinance stipulates safety and environmental control measures for construction practices. The ordinance sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments. The ordinance also establishes the administrative procedure for issuance of permits and provides for approval of plans and inspection of grading construction. All grading activities are required to be permitted by the County's building official except for those indicated in the ordinance. The ordinance also sets forth other requirements that must be met before any permit is issued. The County requires erosion control measures and inspections to be made by the building official.

3.7.4 Impacts Analysis

3.7.4.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to geology and soils are considered significant if implementation of the Proposed Project would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
    - Strong seismic ground shaking?
    - Seismic-related ground failure, including liquefaction?
    - Landslides?
- Result in substantial soil erosion or the loss of topsoil?
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.7.4.2 Impact Discussion

Threshold 1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

The Project Area is located within a seismically active area of California and has a high likelihood for seismic activity; however, the Project Area does not intersect with an established Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo fault zones are the Nuñez Fault Zone located approximately 20 miles west-northwest and the San Andreas Fault Zone located approximately 26 miles southwest of the

Project Area. Additionally, two segments of the Great Valley Fault Zone are located adjacent to the Project Area. The Proposed Project would introduce structures and people to the Project Area (construction workers and periodic maintenance workers) and could thus expose structures and people to seismic risks. The proposed structures on site would not be habitable. In addition, the Proposed Project would be subject to all appliable ordinances of the Fresno County Department of Public Works and Planning and would adhere to California Building Code requirements. Adherence to all applicable regulations would mitigate any potential fault rupture-related impacts associated with the Proposed Project. Therefore, impacts related to fault rupture would be less than significant.

ii) Strong seismic ground shaking?

The Project Area is located within a historically active seismic region that could experience one or more substantive seismic events in the future as shown on Table 3.7-1. Areas closest to the San Andreas Fault Zone have a relatively high likelihood (8 percent to 21 percent) of a significant earthquake occurring within the next 30 years while the rest of the faults have a very small likelihood (less than 1 percent) of a high magnitude earthquake occurring within the same time period.

Given that the Project Area nearly intersects with two segments of the Great Valley Fault Zone and is located approximately 26 miles from the San Andreas Fault Zone, the likelihood for seismic activity and significant ground shaking should be considered high. A preliminary, site-specific geotechnical engineering investigation was performed to provide design recommendations for earthquake resistance and compliance with state and local building code requirements. Westwood (2024) assessed the Project location to be a Seismic Site Class "D." Although the potential for significant ground shaking is considered high, the potential for surface rupture or dry sand settlement is undetermined, and the potential for liquefaction or landslide is considered low. A final geotechnical investigation report with design-specific recommendations will be provided during the design phase of the Project. By incorporating recommended and required safety standards into the Project design, the final facility would pose a less than significant risk for impact (Tetra Tech 2025h).

Depending on the magnitude, distance to the source, and duration of shaking, damage to the Proposed Project facilities and injury to workers or visitors could result. However, because the Proposed Project would not establish a permanent onsite population during operations and maintenance, damage to onsite structures would not expose a substantial number of people to potential adverse effects due to strong seismic ground shaking.

Additionally, the Project facility would be constructed in compliance with the geotechnical and seismic design criteria required for construction in accordance with the California Building Code. Therefore, ground shaking impacts in the Project Area would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction can occur when unconsolidated and water-saturated sediments become unstable due to the effects of strong seismic shaking. The State does not identify any areas of concern for liquefaction in this part of the Great Valley. The potential for liquefaction or seismically induced settling in the Project Area is considered low based on the physical soil properties and groundwater depth. No shallow groundwater

conditions are found in the general vicinity and underlying sediments are quite cohesive. Additionally, the Proposed Project is not anticipated to introduce any new habitable structures that would expose people to substantial adverse effects from seismic-related ground failure. Therefore, impacts would be less than significant.

iv) Landslides?

The potential for material to detach and move downslope during landslides depends on multiple factors, including soil type, moisture content, and steepness of terrain. The topography of the Project Area is nearly level and there are no adjacent hills. There are no mapped landslides in or around the Project Area; therefore, the potential for landslide hazards to occur is very low. As such, the construction, operation, and decommissioning of the Proposed Project would not expose people or structures to potential substantial adverse effects involving landslides; therefore, impacts would be less than significant.

Threshold 2: Would the project result in substantial soil erosion or the loss of topsoil?

Project construction would involve ground-disturbing activities that could expose soils to the effects of wind or water erosion. The soils found in the Project Area are moderately susceptible to erosion from surface water sheet flow and rill runoff. They are also moderately susceptible to the effects of wind erosion. However, the Project Area is generally flat, which will help limit the erosive tendencies of the soils.

Construction activities would result in the disturbance of an area greater than 1 acre and would temporarily increase erosion, runoff, and sedimentation. The Project Proponent would be required to obtain and comply with the National Pollutant Discharge Elimination System Construction General Permit, and implement dust control measures, which would include construction best management practices to control and limit sedimentation and erosion. Thus, impacts are considered less than significant.

Threshold 3: Would the project 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?

No unstable soil or geologic unit has been identified on or near the Project Area, indicating a low likelihood that activities planned for the Proposed Project would lead to landslides, lateral spreading, subsidence, liquefaction, or soil collapse. Therefore, impacts are considered less than significant.

Threshold 4: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils are clay rich soils that swell and shrink with wetting and drying. The shrink-swell capacity of expansive soils can result in differential movement below or adjacent to a structure, resulting in distress. None of the soils present in the Project Area have been identified as having a high capacity for swelling or shrinking. The final geotechnical investigation report will provide definitive, site-specific information and data on expansive soils, and will provide recommendations (if necessary) to limit

structural risks (Tetra Tech 2025h). Therefore, construction and operation of the Project are not expected to subject people and structures to the effects of expansive soils. Impacts would be less than significant.

Threshold 5: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The Proposed Project would not include the use of septic tanks or an alternative wastewater disposal system; therefore, the soils onsite would not need to be adequate for supporting such systems. No impacts would occur.

Threshold 4: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Project is in the southern half of the Great Valley Geomorphic Province. The geologic unit found at the surface is characterized as Holocene-age surficial sediments (Quaternary alluvium [Q]) and underlain by Pleistocene-age sediments (consolidated Pliocene and/or Pleistocene sedimentary rocks [QPc]) estimated at a depth of no less than 15 feet below the ground surface.

Based on the likelihood of finding paleontological resources in each unit, the Holocene-age unit was judged to have low paleontological potential while the Pleistocene-age unit was judged to have undetermined paleontological potential. It is possible, though unlikely, that paleontological resources might be encountered if excavations exceed a depth of 15 feet below the ground surface in the Project Area. This could result in potentially significant impact if paleontological resources are encountered and inadvertently destroyed during ground-disturbing activities. The inadvertent discovery of a paleontological resource during construction cannot be entirely discounted; therefore, implementation of mitigation measures GEO-1 and GEO-2 would reduce impacts in this regard to less than significant.

3.7.5 Mitigation Measures

GEO-1: **Paleontological Worker Education and Awareness Program (WEAP).** Before starting construction activities, onsite personnel shall conduct Paleontological WEAP. The training shall include an overview of potential paleontological resources, basic recognition of paleontological resources, and appropriate procedures to notify management to engage a qualified paleontological specialist in the event that paleontological resources are discovered during construction activities (an unanticipated find).

GEO-2: **Inadvertent Discovery of Paleontological Resources.** If a paleontological resource is found, all ground-disturbing activities within 50 feet of the find shall immediately cease and a qualified paleontologist shall be notified. The qualified paleontologist shall evaluate the significance of the resources and recommend appropriate treatment measures. The qualified paleontologist shall prepare a report documenting evaluation and/or additional treatment of the resource. Any report documenting an unanticipated find shall be submitted to the County.

3.7.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.8 Greenhouse Gas Emissions

3.8.1 Introduction

This section describes the affected environment and regulatory setting relating to GHGs for the Proposed Project. Greenhouse gas impacts are considered significant if the Proposed Project would (1) generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.

The analysis is based on the following technical document included as an appendix:

- Air Quality and Greenhouse Gas Technical Report, San Luis West Solar Project (Tetra Tech 2025c; Appendix F).

3.8.2 Environmental Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency 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 GHG effect, is responsible for maintaining a habitable climate on earth. Without the GHG effect, the earth would not be able to support life as we know it. As the atmospheric concentrations of GHGs rise, however, the average temperature of the lower atmosphere gradually increases, thereby increasing the potential for indirect effects such as a decrease in precipitation as snow, a rise in sea level, and changes to plant and animal species and habitat (Tetra Tech 2025c).

Table 3.8-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the GHG effect.

Table 3.8-1. Summary of Greenhouse Gases

Greenhouse Gas	Description
Carbon dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[†]

Table 3.8-1. Summary of Greenhouse Gases	
Greenhouse Gas	**Description**
Methane (CH_4)	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years.‡
Nitrous oxide (N_2O)	Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.*

Sources: †U.S. Environmental Protection Agency 2023a, ‡2023b, *2023c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.8.2.1 Global Warming Potential

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed 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. More specifically, experts agree that human activities, principally through emissions of GHGs, have unequivocally caused global warming, with global surface temperature reaching 1.1 degree Celsius above 1850 to 1900 in 2011 to 2020 (Intergovernmental Panel on Climate Change [IPCC] 2023).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential (GWP). The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the

instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of CO_2. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_{2e}.

Project-related CO_2e emissions can be tabulated in metric tons per year metric tons of carbon dioxide equivalents ($MTCO_2e$) by applying the GWP ratios. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 3.8-2.

Table 3.8-2. Global Warming Potentials and Atmospheric Lifetimes

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50 to 200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-324a	14	1,430
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Notes: HFC = hydrofluorocarbon; PFC = perfluorochemicals

Source: Intergovernmental Panel on Climate Change 2007

3.8.2.2 Climate Change

The major concern with GHGs is that increases in GHG concentrations in the atmosphere are causing global climate change, which is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature.

According to California Air Resources Board (CARB), the potential impacts in California due to global climate change may include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems (CARB 2008). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC 2001):

- Higher maximum temperatures and more hot days over nearly all land areas
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas

- Reduced diurnal temperature range over most land areas.
- Increase of heat index over land areas
- More-intense precipitation events

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, ocean acidification (including coral bleaching), impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, the potential for substantial environmental, social, and economic consequences over the long-term may be great.

3.8.3 Regulatory Setting

3.8.3.1 Federal

Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic and Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the *maximum feasible level* with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.

In September 2019, USEPA finalized the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program and announced its decision to withdraw the Clean Air Act (CAA) Preemption waiver granted to the State of California in 2013. However, on March 9, 2022, the USEPA reinstated California's authority under the CAA to implement its own greenhouse gas emission standards for cars and light trucks, and zero emission vehicle sales mandate.

Mandatory Greenhouse Gas Reporting Rule (40 Code of Federal Regulations 98)

On September 22, 2009, the USEPA issued a final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. In general, this national reporting requirement provides the USEPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly available data allows the reporters to track their own emissions, compare them to similar facilities, and help identify cost-effective opportunities to reduce emissions in the future. Reporting

is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers report at the corporate level. An estimated 85 percent of the total United States GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act

On December 7, 2009, the USEPA adopted its *Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CAA* (Endangerment Finding). The Endangerment Finding is based on Section 202(a) of the CAA, which states that the Administrator (of USEPA) should regulate and develop standards for:

> emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

The rule addresses Section 202(a) in two distinct findings. The first addresses whether the concentrations of the six key GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the health and welfare of current and future generations. The second addresses whether the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and therefore the threat of climate change.

The Administrator found that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CAA. The evidence supporting this finding consists of human activity resulting in *high atmospheric levels* of GHG emissions, which are most likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wildfires, droughts, sea level rise, and higher intensity storms) are a threat to public health and welfare.

The Administrator also found that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. The USEPA's final findings respond to the 2007 U.S. Supreme Court decision that GHGs fit within the CAA definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but rather allow the USEPA to define the GHG standards proposed earlier in 2009 for new light-duty vehicles as part of the joint rulemaking with the U.S. Department of Transportation.

Various subsequent federal rulemakings limit GHG emissions from fossil fuel-fired power plants through the USEPA's major stationary source permitting program and through USEPA's New Source Performance Standards. These rulemakings have been subject to court challenges and political manipulation, such that applicants for air permits are required to evaluate the current status of the regulatory requirements at the time of application filing. These GHG rules do not apply to the activities associated with the Project.

Presidential Executive Orders 13990 and 14008

Executive Order (EO) 13990 (Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis), issued on January 20, 2021, directs all federal executive departments and

agencies to immediately review and address the promulgation of federal regulations and other actions that conflict with important national objectives and to immediately commence work to confront the climate crisis.

EO 14008 (Tackling the Climate Crisis at Home and Abroad), issued on January 27, 2021, declares the Administration's policy to build resilience against the impacts of existing climate change and projected changes according to current trajectories in both the United States and with other countries.

3.8.3.2 State

Executive Order S-3-05

EO S-3-05, signed in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code Section 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by 2017.

The Scoping Plan is required by AB 32 to be updated at least every 5 years. The latest update, the 2022 Scoping Plan Update, outlines strategies and actions to reduce GHG emissions in California. The plan focuses on achieving the state's goal of reaching carbon neutrality by 2045 and reducing GHG emissions to 40 percent below 1990 levels by 2030. The plan includes a range of strategies across various sectors, including transportation, industry, energy, and agriculture. Some of the key strategies include transitioning to zero-emission vehicles, expanding renewable energy sources, promoting sustainable land use practices, implementing a low-carbon fuel standard, and reducing emissions from buildings. Additionally, the plan addresses equity and environmental justice by prioritizing investments in communities most impacted by pollution and climate change. The plan also aims to promote economic growth and job creation through the transition to a low-carbon economy.

Senate Bill 32

In August 2016, Governor Edmund (Jerry) Brown, Jr. signed Senate Bill (SB) 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030; the other

provisions of AB 32 remained unchanged. On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provided a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies. The 2017 Scoping Plan also placed an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with Statewide per capita goals of no more than 6 metric tons of CO_2e by 2030 and 2 $MTCO_2e$ by 2050.

Assembly Bill 1279 (California Crisis Act)

In September 2022, Governor Brown signed AB 1279, The California Climate Crisis Act, which requires California to achieve carbon neutrality as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. AB 1279 also requires that by 2045 statewide anthropogenic GHG emissions be reduced to at least 85 percent below 1990 levels and directs CARB to ensure that its scoping plan identifies and recommends measures to achieve these goals. AB 1279 also directs CARB to identify policies and strategies to enable carbon capture, utilization, and storage and CO_2 removal technologies to meet emission reduction goals. In addition, CARB is required to submit an annual report on progress in achieving the 2022 Scoping Plan's goals.

In response to the passage of AB 1279 and the identification of the 2045 GHG emissions reduction target, CARB published the Final 2022 Climate Change Scoping Plan in November 2022 (2022 Update). The 2022 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying a new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Update includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Update assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan; addresses recent legislation and direction from Governor Newsom; extends and expands upon these earlier plans; and implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, as well as taking an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Update:

> ...the plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the State's natural and working lands and using a variety of mechanical approaches.

Specifically, the 2022 Update achieves the following:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporates the contribution of natural and working lands to the State's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Update includes emissions and carbon sequestration in natural and working lands and explores how they contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. Cap-and-trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet these GHG emissions reduction goals and achieve carbon neutrality no later than 2045. The 2022 Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

Senate Bill 100 of 2018

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

Senate Bill 1020 of 2022

SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022, adds interim targets to the policy framework originally established in SB 100 to require renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all retail electricity sales by 2040. Additionally, the bill requires all state agencies to rely on 100 percent renewable energy and zero-carbon resources to serve their own facilities by 2035. This bill also requires that CARB's Scoping Plan workshops

be held in non-attainment areas and requires the California Public Utilities Commission, the California Energy Commission, and CARB to create a joint report on electricity reliability.

Senate Bill 375

SB 375 set forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHG emissions. SB 375 was adopted with a goal of reducing fuel consumption and GHG emissions from cars and light trucks. Under SB 375, CARB was required to set GHG reduction targets for each metropolitan region for 2020 and 2035, and each of California's metropolitan planning organizations was responsible to prepare a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning.

2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the state on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2022 California Building Code (CBC) includes provisions related to energy efficiency to reduce energy consumption and GHG emissions from buildings. Some of the key energy efficiency components of the codes are listed below:

- Energy Performance Requirements: The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components
- Lighting Efficiency: The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures
- Heating, Ventilation, and Air Conditioning (HVAC) Systems: The codes establish requirements for HVAC systems, including the use of high-efficiency equipment, duct sealing, and controls
- Building Envelope: The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort
- Renewable Energy: The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on non-renewable energy sources
- Commissioning: The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently

Overall, the energy efficiency provisions of the 2022 CBC aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The Energy Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The exact amount by which the 2022 CBC is more efficient compared to the 2019 CBC would depend on the specific provisions that have been updated and the specific building being considered. However, in general, the 2022 CBC has been updated to include increased requirements for energy efficiency, such as higher

insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 standards are a major step toward meeting Zero Net Energy.

3.8.3.3 Local

San Joaquin Valley Air Pollution Control District

On December 17, 2009, San Joaquin Valley Air Pollution Control District's (SJVAPCD) Governing Board adopted a Climate Change Action Plan (CCAP). The CCAP directed the District Air Pollution Control Officer to develop guidance to assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change (SJVAPCD 2009a).

The SJVAPCD Governing Board has also adopted the Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009b). This policy proposes an approach intended to streamline the process of determining if project specific GHG emissions would have a significant effect. The methodology relies on the use of performance-based standards, or also known as Best Performance Standards (BPS), to determine significance of project-specific GHG emission impacts. Establishing BPS would help project proponents, lead agencies, and the public by proactively identifying effective, feasible GHG emission reduction measures.

The SJVAPCD found that the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climate change could be deemed cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

Projects implementing any combination of BPS, and/or demonstrating a total 29 percent reduction in GHG emissions from business-as-usual, would be determined to have a less than significant individual and cumulative impact on global climate change (SJVAPCD 2015a).

Fresno Council of Governments

Senate Bill 375 requires metropolitan planning organizations to prepare a Sustainable Community Strategy (SCS) in their Regional Transportation Plan (RTP). The Fresno Council of Governments (FCOG) adopted the 2022 RTP/SCS (FCOG 2022a) in July 2022. The RTP/SCS is a long-range comprehensive plan for the region's multimodal transportation system. The FCOG updates its RTP every 4 years.

The greenhouse gas (GHG) targets set for the Fresno region call for a 6 percent per capita reduction by 2020, and a 16 percent per capita reduction by 2035. SB 375 requires that FCOG demonstrate in its SCS that GHG emission reduction targets will be met for 2020 and 2035. If not, an Alternative Planning Strategy (APS) shall be prepared to demonstrate how the targets can be met through the alternative strategies in the APS. The FCOG will be able to meet the targets set by CARB through its 2022 RTP/SCS. The reduction identified for 2046 is a projection and not adopted by CARB (FCOG 2022b).

Fresno County General Plan

There are no specific policies related to GHG emissions or climate change in the Fresno County General Plan Policy Document.

3.8.4 Impact Analysis

3.8.4.1 Methodology

The analysis presented within this section is based on both qualitative and quantitative approaches for determining GHG impacts associated with construction, operation, and maintenance of the Proposed Project. The findings in the Air Quality and Greenhouse Gas Assessment prepared for the Proposed Project (located in Appendix F), was used to assess the Project's impacts related to GHG emissions.

The SJVAPCD has not yet established a GHG significance threshold to meet SB 32 targets beyond 2020. Instead, the SJVAPCD supports the use of the interim threshold as established by California Air Pollution Control Officers Association (CAPCOA). Additionally, based on the South Coast Air Quality Management District[1] Draft Guidance Document – Interim CEQA GHG Significance Threshold, Project construction emissions can be amortized by calculating total construction period emissions and dividing by the 30-year lifetime of the Project (Tetra Tech 2025c).

For this Project, the primary source of GHG is the combustion of fuel in construction equipment, in motor vehicles used to haul materials, and in motor vehicles used by workers commuting to and from the Project Area.

The three primary GHG emitted from fuel combustion are CO_2, CH_4, and N_2O. GHG emissions are presented as CO_2e and are computed based on GWP (Table 3.8-2). Mathematically, the CO_2e can be represented by the following equation:

$$CO_2e \text{ Emissions} = CO_2 \text{ Emissions} + 25 \times CH_4 \text{ Emissions} + 298 \times N_2O \text{ Emissions}$$

CalEEMod was used to estimate emissions from construction and operation of the Proposed Project.

For this Project, a major source of GHG is the combustion of fuel in construction equipment, in motor vehicles used to haul materials, and in motor vehicles used by workers commuting to and from the Project Area. The CalEEMod model quantifies the CO_2, CH_4, N_2O as well as common refrigerant emissions. For typical diesel-fueled combustion equipment used in construction activities, the emissions factors adjusted with global warming equivalence are the following:

- CO_2 emission factors are 22.4 pound of CO_2e per gallon consumed.
- CH_4 emission factors are 0.065 pound of CO_2e per gallon consumed.
- N_2O emission factors are 0.068 pound of CO_2e per gallon consumed.

[1]The South Coast Air Quality Management District is the air pollution control officer for the South Coast Air Basin.

As shown in these emission factors, the CO_2 profile is 99 percent of the total GHG emissions generated in combustion equipment.

3.8.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, GHG impacts are considered significant if implementation of the Proposed Project would:

- generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In the Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA and the policy Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009c), BPS are used to assess significance of project specific GHG emissions on global climate change during the environmental review process. However, SJVAPCD's adopted BPS are specifically directed at reducing GHG emissions from stationary sources; therefore, the adopted BPS would not generally be applicable to the Project as the Project would not be a stationary source of emissions. The SJVAPCD guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change. SJVAPCD supports the use of the interim thresholds as established by CAPCOA. As such, for the purposes of establishing a quantitative threshold for GHG emissions, the interim GHG significance threshold established by CAPCOA is used herein. This threshold is consistent with California's climate-stabilization target (identified in AB 32). GHG emissions include construction emissions annualized over the 30-year life of the Project, as well as operational emissions.

Following CAPCOA's analysis of development applications in various cities, it was determined that the threshold of 900 $MTCO_2e$ per year would achieve the objective of 90 percent capture and ensure that new development projects would keep the State of California on track to meet the goals of AB 32. The 900 metric tons of CO_2e threshold is applied to evaluate whether the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

3.8.4.3 Impact Discussion

Threshold 1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Construction of the Project would increase GHG generation, which can contribute to global climate change. This analysis is provided in response to recent heightened interest in the subject of global climate change and, specifically, in the California Legislature’s passage and the Governor’s signing of AB 32, which is intended to control and reduce the emission of global warming gases in California; and SB 97, which

directs the Office of Planning and Research and the California Resources Agency to develop CEQA Guidelines on how local agencies should analyze and, if necessary, mitigate for GHG emissions.

Construction emissions would be associated with vehicle engine exhaust from construction equipment and vehicles, vendor trips, construction worker commuting trips, and the stationary generators to be used during construction. CalEEMod also calculates indirect GHG emissions from electricity construction. Construction-related GHG emissions are considered temporary and short-term, and as described above, were amortized over a 30-year period and added to the calculated operation phase emissions for comparison to the significance threshold (Tetra Tech 2025c; Appendix F).

The estimated GHG emissions from construction activities associated with the Project are shown in Table 3.8-3.

Table 3.8-3. Estimated Construction Greenhouse Gas Emissions

Phase	Emissions (Metric Tons)		
	CO_2	CH_4	N_2O
Construction Emissions	2,212	0.06	0.10
Global Warming Equivalence Factor	1	25	298
Equivalent CO_2e Emissions[†]	2,212	1.5	31
Total Construction GHG (CO_2e)	2,245		
Amortized Construction Emissions[‡]	75		

Notes: [†]Equivalent CO_2e Emissions = Construction GHG Emissions x Global Warming Equivalent Factor
[‡]30-year emissions are calculated by dividing total construction over 30 years and adding to the annual emissions operational emissions.
CO_2 = carbon monoxide; CO_2e = carbon dioxide equivalent; CH_4 = methane; GHG = greenhouse gas; N_2O = nitrous oxide

As shown in Table 3.8-3, amortized short-term construction CO_2e emissions are estimated to be 75 $MTCO_2e$.

Operations

Operational emissions result from personnel visiting the Project Area for maintenance including visual inspections, monitoring plant performance, executing minor repairs, and responding to needs for plant adjustment. Operations and maintenance vehicles would include light duty trucks (e.g., pickup, flatbed) and other light equipment for maintenance and solar panel washing. Heavy equipment would not be utilized during normal operation. An emergency backup generator will also be located within the Project Area during operations to provide emergency power.

The estimated GHG emissions from operational activities associated with the Project are shown in Table 3.8-4.

Table 3.8-4. Estimated Operational Greenhouse Gas Emissions			
Phase	**Emissions (Metric Tons)**		
	CO_2	**CH_4**	**N_2O**
Operational Emissions	153.6	0.10	0.002
Global Warming Equivalence Factor	1	25	298
Equivalent CO_2e Emissions[†]	153.6	2.60	0.49
Total Operational GHG (CO_2e)	157		
Total Operational GHG Emissions + Amortized Construction GHG Emissions	232		

Notes: [†]Equivalent CO_2e Emissions = Construction GHG Emissions x Global Warming Equivalent Factor
[‡]30-year emissions are calculated by dividing total construction over 30 years and adding to the annual emissions operational emissions.
CO_2 = carbon monoxide; CH_4 = methane; CO_2e = carbon dioxide equivalent; GHG = greenhouse gas; N_2O = nitrous oxide

As shown in Table 3.8-4, estimated annual operational emissions would total approximately 157 $MTCO_2e$, which would result in a total Project emission of 231 $MTCO_2e$ when considering both construction and operational emissions. As shown, the total annual emissions would not exceed the GHG significance threshold of 900 $MTCO_2e$ per year. Because the Project's GHG emissions would not result in a cumulatively considerable contribution, the Project would result in a less than significant cumulative impact in terms of climate change.

In addition, because the Project is intended to generate electricity from a renewable source of energy, it would not result in substantial GHG emissions due to the burning of fossil fuels once in operation. Overall, operation of the Proposed Project would create renewable energy over the life of the Proposed Project. This energy would displace the GHG emissions which would otherwise be produced by existing power generation resources (including natural gas, coal, and renewable combustion resources). The Proposed Project would generate a maximum of 125 megawatts of electricity at any one time, which would serve to displace GHG emissions and, thus, assisting in the attainment of the State's goal to reduce GHG emissions. Therefore, operation of the Proposed Project would result in a substantial net reduction in GHG emissions, even when accounting for the minimal operational GHG emissions of the Proposed Project from a small number of periodic maintenance and vehicle trips.

Given that the Proposed Project would result in a net decrease of CO_2e emissions, impacts related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment would be considered less than significant.

Threshold 2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas?

The Project would keep with renewable energy targets under the Scoping Plan and SB 350 by providing a source of renewable energy to achieve the renewable portfolio standard of 60 percent by the end of 2030. While GHG would be generated from construction and occasional operation and maintenance activities, the Project would result in a net reduction in GHG from battery storage that would potentially replace energy generated by fossil fuels. The Project would assist in the attainment of the state's goals by using a renewable source of energy that could displace electricity generated by fossil-fuel-fired power plants, and therefore would comply with the goals and objectives of the state.

CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022) was prepared to address climate legislation passed since the last scoping plan, which was prepared in 2017. The Scoping Plan addresses AB 1279, SB 905, SB 1065, SB 1075, and other legislation and EOs addressing GHG reductions in various manufacturing sectors and managing natural lands.

The Scoping Plan lays out a roadmap for achieving carbon neutrality in California by 2045 or sooner. The 2022 Plan addresses recent legislation and extends and expands upon earlier CARB plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. The carbon neutrality goal is new in the 2022 Plan and proposes both emissions reductions as well as capture and storage. Much of the state's success to date in reducing GHGs is due to decarbonization of the electricity sector as a result of the Renewable Portfolio Standards, SB 100 implementation, and the Cap-and-Trade Program (CARB 2022). Clean energy generation and storage are a part of the 2022 Plan. According to the Scoping Plan, the estimated resources needed to meet future energy demand is approximately 72 gigawatts (GW) of utility solar and 37 GW of battery storage by 2045. The Scoping Plan also acknowledges that both solar and battery storage projects over the period 2022-2035 will need to increase from the current proposed projects.

Under the SJVAPCD's CEQA thresholds for GHG, a project would not have a significant GHG impact if it is consistent with an applicable plan to reduce GHG emissions, and a CEQA-compliant analysis was completed for the GHG reduction plan. The GHG emission goals in the FCOG RTP/SCS are based on demographic data trends and projections that include household, employment, and total population statistics. The Project is anticipated to have one to two personnel traveling to the facility on a weekly basis starting in 2025. On intermittent occasions, workers may be required for repairs or replacement of equipment and other specialized maintenance. However, due to the self-operating nature of the facility, such actions would occur infrequently. The additional jobs estimated by the Project would be well within the annual growth projection for the FCOG 2022 RTP/SCS. Therefore, the Project would be consistent with the FCOG 2022 RTP/SCS and would not conflict with an applicable plan.

Impacts would be less than significant.

3.8.5 Mitigation Measures

No mitigation is required.

3.8.6 Level of Significance After Mitigation

Impacts would be less than significant.

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3.9 Hazards and Hazardous Materials

3.9.1 Introduction

This section discusses the potential environmental effects of the Proposed Project related to hazards and hazardous materials. Impacts to hazards and hazardous materials are considered significant if the Proposed Project would (1) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; (2) create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment; (3) emit hazardous emissions or handle hazardous materials or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; (4) be located on a site that is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment; (5) Result in a safety hazard or excessive noise for people residing or working in the project area, for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport; (6) Impair implementation of or physically interfere with an adopted emergency plan; or (7) expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The analysis is based on the following technical document included as an appendix to the Draft EIR:

- Reclamation Plan, San Luis West Solar Project (Tetra Tech 2024a; Appendix C)
- Pest Management Plan, San Luis West Solar Project (Tetra Tech 2024b; Appendix E)

3.9.2 Environmental Setting

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (Health and Safety Code [HSC] Section 25501(n)(1)). The term *hazardous materials* refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it has one or more of the following characteristics:

- Toxicity (causes adverse human health effects);
- Ignitability (has the ability to burn);
- Corrosivity (causes severe burns or damage to materials); or
- Reactivity (causes explosions or generates toxic gases).

In some cases, the soil and/or groundwater on a site is contaminated due to past industrial or commercial activities that have resulted in spills or leaks of hazardous materials or wastes to the subsurface. Depending on the type and concentrations of contamination, potential exposure can threaten public health if released from the soil, groundwater, or into the air. The primary exposure pathways through

which an individual can be exposed to a hazardous material or waste are inhalation, ingestion, and direct contact. Exposure can result from an accidental release of hazardous materials during transport, storage, or handling. Disturbance of contaminated subsurface soil during construction can also cause exposure to workers, the public, or the environment through excavating, stockpiling, handling, or transport of such soils.

The Project Area is located in a rural, agricultural area of Fresno County (County). Hazardous waste handlers and generators in Fresno County include industries, businesses, public and private institutions, and residences. Agricultural land use can also involve the storage and handling of hazardous materials and wastes (e.g., application of pesticides and the storage and use of fuels). Gasoline stations and other facilities that use or store fuels, solvents, chemicals, or other hazardous materials represent other potential sources of hazardous materials in rural areas. The presence of these potential sources of hazardous materials, if encountered, can cause exposures that may result in adverse environmental and health effects depending on the extent of exposure.

The Fresno County Environmental Health Department is the designated Certified Unified Program Agency in Fresno County. This department implements the Hazardous Waste Generator Program and the Hazardous Waste Treatment/Tiered Permit Program to ensure that all hazardous waste generated in Fresno County is properly handled, recycled, treated, stored, and disposed (Fresno County 2023b).

3.9.2.1 Emergency Response

The Fresno County Multi-Jurisdictional Hazard Mitigation Plan (Fresno County 2018) is the guiding document for emergency procedures within Fresno County. The Plan documents Fresno County's hazard mitigation planning process, identifies relevant hazards and vulnerabilities, and provides strategies the County and participating jurisdictions will use to decrease vulnerability and increase resiliency and sustainability in Fresno County.

3.9.2.2 Schools

There are no schools within 0.25 mile of the Project Area. The nearest schools are Huron Migrant Head Start and Huron Middle School. Each is approximately 3.25 miles north of the Project Area.

3.9.2.3 Airports

There are no airports within 2 miles of the Project Area. The nearest airports are the New Coalinga Municipal Airport (approximately 9.3 miles west of the Project Area) and the Harris Ranch Airport (approximately 10 miles northwest of the Project Area).

3.9.3 Regulatory Setting

3.9.3.1 Federal

Toxic Substances Control Act/Frank R. Lautenberg Chemical Safety Act of the 21st Century

The Toxic Substances Control Act of 1976 (TSCA) (15 U.S. Code [USC] 2601 et. seq.) addresses the production, importation, use, and disposal of specific chemicals and provides the U.S. Environmental Protection Agency (USEPA) with the authority to require reporting, record-keeping and testing requirements, and restrictions on chemical substances. The TSCA was amended by the Frank R. Lautenberg Chemical Safety Act of the 21st Century (Lautenberg Chemical Safety Act) in 2016. The Lautenberg Chemical Safety Act provides improvements such as a mandatory requirement for the USEPA to evaluate existing chemicals with clear and enforceable deadlines, risk-based chemical assessments, increased public transparency, and consistent sources of funding.

Hazardous Materials Transportation Uniform Safety Act

The purpose of the Hazardous Materials Transportation Uniform Safety Act (49 USC §5101 et seq.) is to "protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce." The U.S. Department of Transportation regulates hazardous materials transportation on all interstate roads pursuant to its authority under the Act. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol and the California Department of Transportation. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) amends the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and governs hazardous substances. CERCLA established prohibitions and requirements for inactive and abandoned hazardous waste sites, emphasized liability for cleanup costs on persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The applicable part of SARA for the Project is Title III, otherwise known as the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). EPCRA establishes requirements for federal, state, and local governments, as well as Native American tribes and industry members regarding emergency planning and reporting on hazardous and toxic chemicals. Key sections of the law include:

- *Section 304:* Requires immediate notification to the Local Emergency Planning Committee (LEPC) and the State Emergency Response Commission (SERC) when a hazardous material is released in

excess of its Reportable Quantity (RQ). If a CERCLA-listed hazardous substance RQ is released, notification must also be given to the National Response Center in Washington, D.C. (RQs are listed in 40 Code of Federal Regulations (CFR) Part 302, Table 302.4). These notifications are in addition to notifications given to the local emergency response team or fire personnel.

- *Section 311*. Requires that either material safety data sheets for all hazardous materials or a list of all hazardous materials be submitted to the SERC, LEPC, and local fire department.

Solid Waste Disposal Act of 1965/Resource Conservation and Recovery Act/Federal Hazardous and Solid Waste Amendments

The Solid Waste Disposal Act of 1965, the first major federal law directed at waste disposal, regulated the treatment, storage, and disposal of solid non-hazardous and hazardous waste. The Solid Waste Disposal Act of 1965 was amended by the Resource Conservation and Recovery Act (RCRA) in 1976 (42 USC 6901 et. seq). The RCRA established a program, which is administered by the USEPA, to regulate the generation, transport, treatment, storage, and disposal of hazardous waste and the management of non-hazardous solid wastes. The RCRA program also establishes standards for hazardous waste treatment, storage, and disposal units, which are intended to minimize present and future threats to the environment and human health. The RCRA was amended in 1984 by the Federal Hazardous and Solid Waste Amendments, which focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. The Federal Hazardous and Solid Waste Amendments also increased the USEPA's enforcement authority and established strict hazardous waste management standards and a comprehensive underground storage tank program.

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act was established in 1970 to set and enforce safety and health standards for workers. The federal regulations pertaining to worker safety are contained in Title 29 of the CFR. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. At sites known or suspected to have soil or groundwater contamination, construction workers must receive training in hazardous materials operations and a site health and safety plan must be prepared. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

North American Electric Reliability Corporation Standards

The North American Electric Reliability Corporation (NERC) is a nonprofit corporation comprising 10 regional reliability councils. The overarching goal of the NERC is to ensure the reliability of the bulk power system in North America. To achieve its goal, NERC develops and enforces reliability standards, monitors the bulk power systems, and educates, trains, and certifies industry personnel (NERC 2024). To improve the reliability of regional electric transmission systems and in response to the massive widespread power outage that occurred on the Eastern Seaboard, the NERC developed a transmission vegetation management program that is applicable to all transmission lines operated at 200 kV and above to lower

voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region.

The program, which became effective on April 7, 2006, establishes requirements of the formal transmission vegetation management program, which include identifying and documenting clearances between vegetation and any overhead, ungrounded supply conductors, while taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway. The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers Standards Association (IEEE) Standard 516-2003 (*Guide for Maintenance Methods on Energized Power Lines*) (IEEE 2003), which establishes minimum vegetation-to-conductor clearances to maintain electrical integrity of the electrical system.

3.9.3.2 State

California Hazardous Materials Release Response Plans and Inventory Law

The California Hazardous Materials Release Response Plans and Inventory Law (Business Plan Act, Health and Safety Code Section 25500 et seq.) requires any business that handles hazardous materials at or above specified thresholds to prepare a Hazardous Materials Business Plan (HMBP). The thresholds include any site that stores hazardous materials in the excess of 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet for a compressed gas. The HMBP much include the following:

- Details, including floor plans, of the facility and business conducted at the site;
- An inventory of hazardous materials that are handled or stored on-site;
- An emergency response plan; and
- A safety and emergency response training program for new employees with annual refresher courses.

The primary purpose of the HMBP requirement is to provide basic information needed by first responders to prevent or mitigate damage to the public health and safety and to the environment from a release or threatened release of a hazardous material. HMBP requirement could apply, for example, to the handling of mineral oil, which is a highly refined hydrocarbon-based oil used as an insulation medium and coolant in transformers and other electrical equipment.

Cortese List

The Cortese List, under California Government Code Section 65962.5, includes a list of hazardous waste facilities and sites. The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the CEQA. Under Section 65962.5 (a) through (d):

- The California Department of Toxic Substances Control (DTSC) shall compile and update a list of:

- all hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the California HSC;
- all land designated as hazardous waste property or border zone property pursuant to HSC Article 11, Chapter 6.5, Division 20;
- all information received by DTSC pursuant to HSC Section 25242 on hazardous waste disposals on public land;
- all sites listed pursuant to HSC Section 25356; and
- all sites included in the Abandoned Site Assessment Program.

- The State Department of Health Services shall compile and update a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to HSC Section 116395.
- The State Water Resources Control Board (SWRCB) shall compile and update a list of:
  - all underground storage tanks for which an unauthorized release report is filed pursuant to HSC Section 25295;
  - all solid waste disposal facilities from which there is a migration of hazardous waste and for which a California Regional Water Quality Control Board has notified DTSC pursuant to subdivision (e) of Section 13273 of the Water Code; and
  - all cease-and-desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13304 of the Water Code, that concern the discharges of wastes that are hazardous materials.
- The local enforcement agency shall compile a list of all solid waste disposal facilities from which there is a known migration of hazardous waste.

California Department of Industrial Relations Division of Occupational Safety and Health

The California Department of Industrial Relations Division of Occupational Safety and Health (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved occupational safety and health program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that safety data sheets be available to employees, and that employee information and

training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

California Fire Code

The California Fire Code is contained within Title 24, Chapter 9 of the California Code of Regulations (CCR). Based on the International Fire Code, the California Fire Code is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the California Fire Code and the California Building Code use a hazards classification system to determine the appropriate measures to incorporate to protect life and property. Section 608 of the International Fire Code has been adopted by the State of California to minimize risk of fire from stationary battery storage systems and to contain fire in the event of such an incident. Compliance with Article 480 of the Electrical Code, which identifies insulation and venting requirements for stationary storage batteries, further reduces potential fire risk.

California Code of Regulations

The CCR contains additional requirements that would apply to the Project, including:

- 8 CCR Section 2700 et seq., High Voltage Electrical Safety Orders, which establish essential requirements and minimum standards for installation, operation, and maintenance of electrical equipment to provide practical safety and freedom from danger.
- 14 CCR Sections 1250 to 1258, Fire Prevention Standards for Electric Utilities, which provide specific exemptions from electric pole and tower firebreak and electric conductor clearance standards and specify when and where standards apply. They establish minimum clearance requirements for flammable vegetation and materials surrounding structures.
- 22 CCR Section 66273, Standards for Universal Waste Management, which regulates the management of universal wastes. These wastes are not fully regulated as hazardous waste in order to encourage their recycling. Batteries, electronic devices, mercury containing equipment, lamps, cathode ray tubes and tube glass, and aerosol cans are considered universal wastes in California. A person or business who generates universal waste is required to follow the Management Requirements for Universal Waste Handlers (22 CCR Sections 66273.30 to 66273.39), which include storage, spill protection, and disposal rules designed to minimize risk of harm to public health and the environment.

California Public Resources Code

The Public Resources Code includes fire safety regulations that apply to State Responsibility Areas (SRAs) during the time of year designated as having hazardous fire conditions, i.e., *fire season*. During the fire hazard season, these regulations restrict the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided onsite for various types of work in fire-prone areas. Codes applicable to the Proposed Project include the following:

- Public Resources Code Section 4291 provides that a person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining brush- or grass-covered lands or land that is covered with flammable material shall at all times maintain defensible space of 100 feet from each side and from the front and rear of the structure, but not beyond the property line.
- Public Resources Code Sections 4292 and 4293 require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line shall maintain a firebreak clearing around and adjacent to any pole, tower, and conductor that carries electric current as specified in the section.

State of California Emergency Plan

The California Governor's Office of Emergency Services (Cal OES) developed the State of California Emergency Plan to coordinate federal, state, local, and private agency emergency service providers' response to natural or human-caused emergencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the Cal OES, which coordinates the responses of other agencies.

3.9.3.3 Local

Fresno County General Plan

The County's General Plan includes goals and policies related to hazards and hazardous materials. The following are applicable to the Proposed Project:

- *Goal HS-B:* To minimize the risk of loss of life, injury, and damage to property and natural resources resulting from fire hazards.
    - *Policy HS-B.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.7: Fire and Emergency Vehicle Access.* 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.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 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.

- *Goal HS-F:* To minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.
  - *Policy HS-F.1: Hazardous Materials Facilities*. The County shall require that facilities that handle hazardous materials or hazardous wastes be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.

Fresno County Solar Facility Guidelines

The Fresno County Solar Facility Guidelines include a provision that requires the preparation of a reclamation plan detailing the lease life, timeline for removal of the improvements, and specific measures to return the site to the agricultural capability prior to installation of solar improvements. While not specifically addressing hazardous materials, the reclamation plan would provide for the disposal/recycling of materials (solar panels, inverters, and other infrastructure) in accordance with applicable regulations for the disposal of hazardous materials.

3.9.4 Impact Analysis

3.9.4.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts related to hazards and hazardous materials are considered significant if implementation of the Proposed Project would:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment;

- emit hazardous emissions or handle hazardous materials or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- be located on a site that is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- result in a safety hazard or excessive noise for people residing or working in the project area, for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport;
- impair implementation of or physically interfere with an adopted emergency plan; or
- expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

3.9.4.2 Impact Discussion

Threshold 1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction

The Proposed Project would not involve the routine transport, use, or disposal of hazardous materials, as defined by the Hazardous Materials Transport Uniform Safety Act. Waste generated during construction would be nonhazardous and consist primarily of cardboard, wood pallets, wire, scrap metal, common trash, and wood wire spools. Most construction waste would be disposed of at a nonhazardous landfill or at a recycling facility whenever feasible. Construction materials would be handled in accordance with the California Green Building Standards Code, which establishes standards for construction and demolition waste management, and recycling or salvage of a minimum of 65 percent of nonhazardous construction and demolition waste. Non-recyclable construction waste would be placed into onsite commercial trash dumpsters which would be collected and taken to a landfill as needed by a commercial service. Sanitary waste would be managed using portable toilets and hauled for offsite disposal.

During Project construction, diesel and gasoline fuels and other hazardous materials, such as oils, solvents, hydraulic fluids, and paints commonly associated with construction equipment, may be stored onsite. To limit the exposure of construction workers to hazardous materials (e.g., construction-related fuels and paints), construction activities would comply with applicable worker protection laws and regulations. This includes the Occupational Safety and Health Act, Title 8 and 9 of the CFR. The construction contractor selected for the Project would be responsible for ensuring that construction workers are trained in accordance with local, state, and federal requirements for handling hazardous materials. Workers would also be trained to properly identify and handle all hazardous materials. These materials would be stored and handled in a manner to prevent accidental release and consistent with the hazardous materials handling Best Management Practices (BMPs) and other measures contained within the required Storm Water Pollution Prevention Plan, which would require hazardous materials to be stored within locked aboveground containers with secondary containment. All applicable materials

present onsite would have safety data sheets readily available to personnel. With these protections in place, impacts would be less than significant.

Operation

Project Operations and Maintenance (O&M) activities may involve the transportation, use, or temporary storage of a variety of hazardous materials, such as batteries, hydraulic fluid, diesel fuel, insulation oil for the transformers, grease, lubricants, paints, solvents, and adhesives. The Project substation would include transformers, breakers, switches, meters, and related equipment.

O&M activities associated with a battery energy storage facility are relatively limited when compared to other industrial land uses. During operation, the Project would require one or two workers in a light utility truck to visit the facility on a weekly basis. O&M staff would visit the site for switching and other operation activities. Maintenance trucks would be used to perform routine maintenance, including but not limited to equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventative maintenance. Long-term maintenance and equipment replacement would be scheduled in accordance with manufacturer recommendations to ensure equipment integrity is maintained. Typically, one major maintenance inspection would take place annually.

The Project would generate a small amount of waste during operation, such as broken or rusted metal, defective or malfunctioning equipment, electrical materials, empty containers, other miscellaneous solid waste, and typical refuse from the O&M staff. Additionally, limited amounts of hazardous materials would be stored or used onsite during Project operation, including diesel fuel, gasoline, and motor oil for vehicles; mineral oil to be sealed within the transformers; and lead-acid-based or lithium-ion-based batteries for emergency backup. Appropriate spill containment and cleanup kits would be maintained during Project operation. Any hazardous materials that would be stored onsite would be contained in designated areas in accordance with an HMBP. Facilities that use and/or store hazardous materials and/or hazardous wastes shall meet the requirements set forth in the California HSC, Division 20, Chapter 6.95, and CCR, Title 22, Division 4.5. Depending on the quantity of battery storage, the facilities may have to comply with either the California Accidental Release Prevention Program or the Federal Risk Management Plan. Adherence to the HMBP as required by the California Hazardous Materials Release Response Plans and Inventory law (Health and Safety Code §25500 et seq.) would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to workers or the public. The site would also be fenced to prevent public access to hazardous materials.

Lithium-ion batteries would likely be used for the proposed energy storage system and would be contained within steel enclosures. Transformers would contain dielectric insulating fluid in the form of vegetable or mineral oil and would not be routinely handled by O&M staff. These materials would be stored in appropriate containers to prevent accidental release. Equipment containing hazardous materials would be equipped with spill containment areas and battery storage would be in accordance with Cal/OSHA requirements, such as inclusion of heating, ventilation, air conditioning, fire protection systems, and spill response supplies. All components would have a comprehensive Spill Prevention, Control, and Countermeasure (SPCC) plan, in accordance with all applicable federal, state, and local regulations. The

preparation and implementation of an SPCC plan would describe proper handling, storage, transport, and disposal techniques and methods to be used to avoid spills and minimize impacts in the event of a spill.

The Project Applicant would be responsible for ensuring the removal and/or treatment of problematic nonnative weed species from the Project Area. Noxious weeds will be removed and/or treated from the Project Area before Project installation and on a regular as-needed basis. Select grasses and herbs (such as Saharan mustard [*Brassica tournefortii*]) may need to be treated or removed during winter in order to be efficiently controlled. Methods of weed control include weed prevention, manual (hand weeding) or mechanical removal (weed whackers and mowing), controlled grazing, or chemical removal. Chemical herbicides will be used after non-chemical options have been exhausted, with a preference for use of a low-risk herbicide that is not toxic to animals, including aquatic organisms. Herbicide application would consist of either 1) spot application to individual plants in areas of sparse noxious weed coverage; 2) broadcast application to dense patches of noxious weeds; or 3) cut stump treatment of individual woody vegetation. Application would use either squirt bottles, back-pack sprayers, or pressure sprayers (Tetra Tech 2024b).

Persons applying herbicide would hold a Qualified Applicator License issued by the California Department of Pesticide Regulation. Those workers with a Qualified Applicator Certificate that apply herbicide must do so under the supervision of a Licensed Applicator (Tetra Tech 2024b).

The Project Applicant would be responsible for ensuring the removal and/or treatment of problematic insect and vertebrate pests from the Project Area. The first line of defense is to implement the weed control plan, which will significantly reduce habitat for insects and vertebrate pests in the Project Area. Rodent and insect pest populations are not expected to become an issue at the outdoor solar arrays, however if rodent populations need to be actively managed and the infestation is indoors, rodenticides may be used if other methods of rodent control fail. Rodenticide use will be used in accordance with local codes and regulations. Rodenticides will be limited to zinc phosphide because of its proven lower risk to the San Joaquin kit fox (*Vulpes macrotis mutica*). The targeted application of a toxic pesticide is allowed only after all other reasonable non-toxic options are exhausted (Tetra Tech 2024b). The Project would adhere to the Pest Management Plan (Appendix E) prepared for the Project which includes chemical control guidelines and practices to follow when the use of chemicals (herbicides, rodenticides, insecticides, or pesticides) is required to control or treat pests. With these protections in place, impacts would be less than significant.

Closure, Decommissioning, and Site Restoration

During the Project decommissioning and site restoration process, all aboveground equipment would be removed, including steel poles and foundations, electrical wiring and batteries, equipment on the inverter pads, transformer pads, substation pad, and other associated equipment. Equipment would be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment offsite. Batteries may be considered hazardous waste in California when they are discarded, whether or not they are rechargeable. Accordingly, the battery modules included in the Battery Energy Storage System would eventually be disposed of in accordance with the applicable hazardous waste requirements. All remaining oil and lubricants removed from

equipment would be transferred to an appropriate container and disposed of in accordance with the manufacturers' specifications and consistent with applicable regulatory requirements (Tetra Tech 2024a).

Once the BESS has been removed, all other associated site infrastructure would be removed, including fences, concrete pads that may support the inverters, transformers, and related equipment, and underground conduit/electrical wiring. All materials would be recycled to the extent feasible. The area would be thoroughly cleaned, and all debris removed. A licensed state waste contractor would be used to ensure that all required laws and regulations have been met and to address any remaining requirements needed to successfully close the Project (Tetra Tech 2024a). As such, impacts would be less than significant.

Threshold 2: Would the project create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Construction

Potential impacts that may result from upset or accidents during construction of the Project include the accidental release of materials, such as hydraulic fluid, fuel, insulation oil, grease, lubricants, paints, solvents, and adhesives. Generally, the quantities of these hazardous materials would be relatively limited and handled in accordance with manufacturer's guidelines. In addition, implementation of the BMPs required by the National Pollutant Discharge Elimination System Construction General Permit would include containment and spill response measures, which would reduce the potential impact from upset and accident conditions during Project construction to a less-than-significant level.

Operation

O&M of the battery energy storage facility would generate little hazardous waste. Electrical equipment used by the Project, such as inverters and each enclosed transformer at the substation, would include an insulating fluid such as vegetable or mineral oil, but upsets or accidents would be controlled via the secondary containment provided in accordance with applicable federal, state, and local laws and regulations. The insulating oil contained in each transformer does not normally require replacement, minimizing the potential for upsets or accidents involving its use. Further, Health and Safety Code Section 25500 et seq. requires the preparation of hazardous materials release response plans, such as an HMBP, under specified circumstances. Any chemicals will be applied or used according to manufacturer's specifications and in accordance with state and federal law and County guidelines. When not in use, chemicals would be stored in containment basins to prevent accidental leakage.

The Project would likely use lithium-ion batteries, which contain flammable and corrosive liquid materials. The potential for hazardous materials to be released during an accidental breakage of the batteries does exist. However, batteries would be housed in multiple self-contained storage system enclosures, as well as the battery storage system controller. The energy storage system controller is a multi-level control system designed to provide a hierarchical system of controls for the battery modules, power conversion station, medium voltage system, and up to the point of connection with the electrical grid. The controllers ensure that the energy storage system effectively responds to grid emergency conditions and provides a

secondary safety system designed to safely shut down the facility. All batteries would be contained within specifications that follow applicable federal state and local requirements, including the inclusion of appropriate ventilation, acid resistant materials, and presence of spill protection supplies.

Removal and/or maintenance of vegetation in and around the Project boundary may require herbicide and if not handled properly, use of these products could create a hazard to the public (construction workers, maintenance employees, and nearby residences). However, application of herbicides would be limited; application would be in accordance with federal, state, and county regulations; and any herbicides would be applied by a state-licensed pesticide applicator. Adherence to regulatory requirements would reduce impacts related to use of herbicides to less than significant.

The Project would not involve the routine transport, use, or disposal of hazardous materials, as defined by the Hazardous Materials Transportation Uniform Safety Act. Adherence to regulations and applicant-proposed protocols during the storage, transportation, and usage of any hazardous materials would minimize and avoid the potential for significant upset and accident conditions. Impacts from Project operations would be less than significant.

Closure, Decommissioning, and Site Restoration

The closure, decommissioning, and site restoration process is summarized in the response to Threshold 1 above. Many components of the BESS are recyclable. Project components would be recycled to the extent feasible, with minimal disposal to occur in landfills in compliance with all applicable laws. The disposal of batteries may be considered hazardous waste and will be disposed of in accordance with applicable hazardous waste requirements. Once the existing structures of the Project and ancillary facilities have been removed, the Project Area would be restored to topographic conditions similar to pre-construction. All disturbed soil surfaces will be prepared for return to agricultural use. These areas will be restored to a condition and forage density similar to the original condition. In all areas, restoration will include, as reasonably required, leveling, terracing, mulching, and other necessary steps to prevent soil erosion (Tetra Tech 2024a). Impacts would be less than significant.

Threshold 3: Would the project emit hazardous emissions or handle hazardous materials or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The Project is not located within 0.25 mile of an existing or proposed school. The nearest schools are Huron Migrant Head Start and Huron Middle School. Each is approximately 3.25 miles north of the Project Area. No impact would occur.

Threshold 4: Would the project be located on a site which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

In California, regulatory databases listing hazardous materials sites provided by numerous federal, state, and local agencies are consolidated in the *Cortese List* pursuant to Government Code Section 65962.5, effective in 1992. However, subsequent changes in web-based information availability since that time have

made a consolidation of this list no longer necessary, and the databases are maintained on an individual basis by the following responsible agencies:

- List of Hazardous Waste and Substances sites from DTSC's EnviroStor database
- List of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from the SWRCB's GeoTracker database
- List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit
- List of *active* Cease and Desist Order and Cleanup and Abatement Order from the SWRCB
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC and listed on their EnviroStor database

The databases cited above identify sites with suspected and confirmed releases of hazardous materials to the subsurface soil and/or groundwater. The DTSC EnviroStor database includes federal and state response sites; voluntary, school, and military cleanups and corrective actions; and permitted sites. The SWRCB GeoTracker database includes LUSTs, permitted underground storage tanks, Department of Defense sites, and Cleanup Program sites. The reporting and statuses of these sites change as identification, monitoring, and cleanup of hazardous materials sites progress. Typically, a listed site is considered no longer to be of concern once it has been demonstrated that existing site uses, combined with the levels of identified contamination present, are determined not to be a significant risk to human health or the environment and the case is closed by the overseeing agency.

According to a review of the GeoTracker and EnviroStor databases, there are no active LUST sites or Cleanup Program sites within 1 mile of the Project Area (SWRCB 2024; DTSC 2024).

The following LUST sites are located within 2 to 2.6 miles of the Project Area (DTSC 2024):

- Indian Auxiliary Field #3
    - Location: Coalinga, California
    - Site Type: Military Evaluation
    - Potential Contaminants of Concern: None Specified
    - Potential Media of Concern: None Specified
    - Status: No Further Action as of 12/22/2016
- Air-Way Farm Duster Ranch
    - Location: 14000 Lassen Avenue, Huron, California 93234
    - Site Type: Cleanup Program Site

- Potential Contaminants of Concern: Gasoline, Petroleum – Automotive; Gasolines, Petroleum – Diesel Fuels
- Potential Media of Concern: Under Investigation
- Status: Open – Inactive as of 04/04/2019

- Woolf Enterprises
  - Location: 17891 Gale Avenue, Huron, California 93234
  - Site Type: LUST Cleanup Site
  - Potential Contaminants of Concern: Gasoline
  - Potential Media of Concern: Soil
  - Status: Completed – Case Closed as of 10/02/1998
- ARCO #5722
  - Location: 20033 Sommerville Lane, Coalinga, California 93210
  - Site Type: LUST Cleanup Site
  - Potential Contaminants of Concern: Gasoline
  - Potential Media of Concern: Soil
  - Status: Completed – Case Closed as of 12/15/2006

The Indian Auxiliary Field #3 Military Evaluation site is located approximately 0.4 mile west of the Project Area and is listed as "No Further Action". The Woolf Enterprises and ARCO sites are listed as *Completed – Case Closed*. The Cleanup Program site at Air-Way Farm Duster Ranch is located approximately 2 miles south of the Project Area and is listed *Open – Inactive*. The total site acres impacted for this Cleanup Program site is not known as of July 2025. A preliminary site investigation discovered that, due to past operations and practices related to several aboveground fuel storage tanks (ASTs), there was degradation of the underlying soil and groundwater. The ASTs contained total petroleum hydrocarbons as diesel and total petroleum hydrocarbons as gasoline. It is classified as a Category 1 site. Category 1 sites are characterized by soil or groundwater contamination that does not pose an immediate human health threat and does not extend offsite onto neighboring properties. Located approximately 2 miles away, the Project Area is not expected to have been adversely affected by migration of hazardous materials through groundwater from this site. Impacts would be less than significant.

Additionally, there are no LUSTs, or Cleanup Program sites documented in the Project Area or in the vicinity, such that encountering aboveground and/or subsurface contamination is not anticipated during construction. The closest open case is a Cleanup Program site located approximately 2 miles north of the Project Area (SWRCB 2024). If any underground storage tank(s) are found during construction, the Applicant shall apply for and secure an Underground Storage Tank Removal Permit from the Fresno

County Department of Public Health, Environmental Health Division. As such, risk of upset and accident conditions would be unlikely. The impacts would be less than significant.

Threshold 5: 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?

The closest airport to the Project Area is the New Coalinga Municipal Airport, located approximately 9.3 miles west of the Project Area. According to the Fresno County Airport Land Use Compatibility Plan, the Project Area is not within any safety zone or noise contours associated with the New Coalinga Municipal Airport (Fresno County 2023a). As such, the Project would not interfere with airport operations or result in a safety hazard for people residing or working in the area. No impact would occur.

Threshold 6: Would the project impair implementation of or physically interfere with an adopted emergency plan?

The Project would not impair implementation of or physically interfere with the Fresno County Multi-Jurisdictional Hazard Mitigation Plan coordinated by the Fresno County Office of Emergency Services. The Project Area is located in a sparsely populated rural area. The Project would not alter or impair any of the existing road networks and would require relatively low staffing for O&M activities. Additionally, the Project would not hinder emergency access to the Project Area or to other roadways in or around the Project vicinity. As a result, the Project would not impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan. No impact would occur.

Threshold 7: Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Project Area is not located within an area identified by the California Department of Forestry and Fire Protection (CAL FIRE) as having substantial or very high risk. The Project Area is not located within an SRA or Federal Responsibility Area. The Project Area is located within a Local Responsibility Area (LRA); however, the location does not overlap with a Fire Hazard Severity Zone (FHSZ) in an LRA (CAL FIRE 2024). The closest residences to the Project Area are located along West Jayne Avenue between South Siskiyou Avenue and South Madera Avenue immediately west of the portion of the Project Subarea C that is south of West Jayne Avenue. The closest very high FHSZ is located 21.5 miles west of the Project Area, west of the City of Coalinga in the Coastal Mountain Range. Given the distance of the very high FHSZ and the flat topography of the Project Area, the wildland fire hazard risk within the Project Area is low.

The Project would be designed in compliance with federal, state, and local worker safety and fire protection codes and regulations, which would minimize the potential for the occurrence of fire. Project maintenance and operation may introduce potential ignition sources, such as transformers, inverters, electric transmission line (including the gen-tie line), substations, maintenance vehicles, gas/electric-powered machinery, and batteries. However, the potential fire risk is low for these Project components. All battery components for the BESS would be installed on concrete pads and contained within an enclosure

to minimize the potential for sparks or ignition. Fire detection measures would be incorporated in the Project design in accordance with National Fire Protection Association safety standards, and all enclosures would be equipped with a fire suppression system. Although the closest people or structures are residences located adjacent to the Project Area, the Proposed Project is not expected to expose these residences, or any other people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

3.9.5 Mitigation Measures

No mitigation is required.

3.9.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.10 Hydrology and Water Quality

3.10.1 Introduction

This section discusses the potential environmental effects of the Proposed Project related to hydrology and water quality. According to Appendix G of the CEQA Guidelines, impacts to hydrology and water quality would be considered significant if the Proposed Project would:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would:
    - result in substantial erosion or siltation on- or off-site;
    - substantially increase the rate or amount of surface run off 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;
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to the project inundation; or
- conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan.

This analysis is based on the following technical document:

- Water Supply Assessment, San Luis West Solar Project (Tetra Tech 2025i; Appendix L)

3.10.2 Environmental Setting

3.10.2.1 Regional Setting and Climate

The Project Area is located on the western edge of the Great Valley Geomorphic Province, which is a broad, flat, alluvial plain about 50 miles wide and 400 miles long in the central part of California between the Sierra Nevada to the east and the Coast Ranges to the west. The Central Valley comprises two major valleys: the Sacramento Valley in the north, drained by the Sacramento River; and the San Joaquin Valley in the south, drained by the San Joaquin River (California Geological Survey 2002). The Project Area is located in the southern part of the San Joaquin Valley.

The climate in the vicinity of the Project Area is Mediterranean, with wet winters and hot, dry summers. Climate data from the Coalinga, California weather station is representative of the local climate. The average maximum temperature varies from a winter low of 58 degrees Fahrenheit in January to a summer high of 99 degrees Fahrenheit in July. The average minimum temperature ranges from a winter low of 36 degrees Fahrenheit in January to a summer high of 66 degrees Fahrenheit in July (WorldClimate 2024). Precipitation occurs primarily from October to March, with very little occurring from April through September. Tetra Tech obtained rainfall records for three nearby California Irrigation Management Information System (CIMIS) weather stations located within 20 miles of the Project Area (CIMIS 2024; Table 3.10-1). The average rainfall amounts for these weather stations is less than 10 inches per year, qualifying this area as arid.

Table 3.10-1. Weather Stations

CIMIS Station		Location (County and Region)	Period of Record	Annual Rainfall Total in Inches (with Year)		
No. & Name	Elevation (feet)			Average	High	Low
#2 Five Point	285	Fresno County; San Joaquin Valley Region	June 1982 to February 2024 (42 years)	8.5	27.22 (2010)	1.52 (2002)
#15 Stratford	193	Kings County; San Joaquin Valley Region	October 1982 to February 2024 (41 years)	7.4	22.40 (1996)	2.30 (2013)
#205 Coalinga	730	Fresno County; San Joaquin Valley Region	March 2010 to February 2024 (14 years)	5.2	9.58 (2023)	1.83 (2012)

Note: CIMIS = California Irrigation Management Information System

Source: CIMIS 2024

Considering only the overlapping, complete years of record for these stations (2010 to 2023) presents a more current and drier picture. The average annual rainfall during the overlap period is 7.5 inches for Five Points, 5.4 inches for Stratford, and 5.2 inches for Coalinga (CIMIS 2024).

3.10.2.2 Surface Water

The Project Area is located on the western edge of the San Joaquin Valley where the valley transitions to the Coastal Ranges geomorphic province. As such, the Project Area is located to the east of the coast ranges, where east-side drainage from the mountains would drain generally toward the east and into the San Joaquin Valley.

The Project Area is located within the six-digit U.S. Geological Survey hydrologic unit identified as the Tulare-Buena Vista Lakes basin (180300) (Tetra Tech 2025i), which is an interior drained portion of the Great Valley Geomorphic Province. The Project Area contains no perennial water courses and few defined channels due to the predominance of agricultural fields and low rainfall amounts. According to the national hydrologic unit identification of watersheds in California, the Project Area falls within the Tulare

Lakebed Hydrologic Unit Code 8 subbasin (18030012) in the southern San Joaquin Valley (Tetra Tech 2025i). The natural surface water in the southern San Joaquin Valley primarily originates in the Sierra Nevada and flows into the valley on its eastern side via the Kern River, Tule River, and Kaweah River. As noted in Section 3.10.2.1, the Proposed Project Area is located in an arid area (less than 10 inches of rainfall per year on average in the area); as such, surface water resources are very limited locally. No perennial streams flow east to the San Joaquin Valley from the coast ranges. The only watershed of note in the general vicinity of the Project Area is Los Gatos Creek, with a southeast trending ephemeral channel about 35 miles northwest of the Project Area near Coalinga.

The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,000 square miles) and includes all of Kings and Tulare counties and most of Fresno and Kern counties. The California Regional Water Quality Control Board (RWQCB) identifies the hydrologic area in which the Project Area is located differently than the national hydrologic unit identification system. The RWQCB calls this hydrologic area (which is roughly the southern half of the San Joaquin Valley) the Westlands Hydrologic Area (HA). The Westlands HA encompasses an area greater than 1,000 square miles, while the South Valley Floor Hydrologic Unit (HU) covers about 16,406 square miles. This HU includes parts of four counties (Fresno, Kern, Kings, and Tulare) and is the largest agricultural region in the State.

The most significant artificial water supply conveyance through the Tulare Lake Hydrologic Region is the California Aqueduct, which runs from north to south moving surface water from the California State Water Project (SWP). SWP waters are distributed to various water agencies and districts throughout southern California, including regional water resource providers in close proximity to the Project Area.

The Project Area is flat, with a gentle (less than 0.5 percent) slope generally to the east. Elevations within the Project Area range from just over 410 feet above sea level on the western side to just under 330 feet above sea level near the California Aqueduct on the eastern side. No natural drainage course traverses the Project Area, and the nearest established channel, Los Gatos Creek, is approximately 1.1 miles northwest of the Project Area. Los Gatos Creek drains a small area of the Coast Ranges and flows east through Coalinga before turning northeast and heading into the San Joaquin Valley.

3.10.2.3 Groundwater

The Project Area is located within Westside Subbasin (5-22.09), which is located in the southern end and west side of the San Joaquin Valley in the Tulare Lake Hydrologic Region. This hydrologic region is an internally drained watershed with surface water inflow from the Kaweah, Kern, Kings, and Tule Rivers (all flowing west out of the Sierra Nevada). There is no outflow of surface water from this hydrologic region, which drains to Tulare Lake, an ephemeral water body that lies southeast of the Project Area. The Westside Subbasin is bordered on the west by the Coast Ranges and composed of Tertiary marine sediments and sedimentary rocks, with little to no groundwater resources; however, the Westside Subbasin is bounded by other subbasins to the north and northeast (5-22.7 Delta-Mendota), to the east (5-22.8 Kings), to the southeast (5-22.12 Tulare), and to the southwest (5-22.10 Pleasant Valley). Recharge to the Westside Subbasin comes from intermittent stream seepage from the Coast Ranges into the western San Joaquin Valley edges from deep seepage of irrigation water over the Tulare Lake Basin itself,

and inter-basin groundwater flow from the eastern edge of the Westside Subbasin (California Department of Water Resources [DWR] 2006).

The aquifer system in the Westside Subbasin includes a shallow, unconfined aquifer composed of unconsolidated continental deposits of Tertiary and Quaternary age that reach depths of 500 feet to 850 feet below ground surface (bgs). An aquitard—known as the Corcoran Clay—underlies the shallow aquifer, separating it from the deep, confined aquifer. The Corcoran Clay varies in thickness from 20 feet to 120 feet. Some useable groundwater occurs in the upper levels of the confined aquifer, but brackish water occurs in the deepest parts of the confined aquifer. Wells draw groundwater from both the deeper, confined aquifer, and the shallow, unconfined aquifer (DWR 2006).

Groundwater from the Westside Subbasin has been used for agricultural purposes since the 1800s. Most wells initially were shallow, drawing groundwater from the upper, unconfined aquifer. Just after the turn of the century, the first deep well (to a depth of 700 feet to 800 feet) was drilled near the present-day Lemoore Naval Air Station, which is located to the east-northeast of the Project Area. Agriculture continued to expand over the Westside Subbasin through the 1940's, with irrigation exclusively using groundwater. In 1963, the Westlands Water District (WWD) agreed to a water supply contract with the United States Bureau of Reclamation to augment the use of groundwater for agriculture. The WWD has expanded its coverage area, initially in 1965 when it merged with the Westplains Water Storage District, and subsequently with additional annexation of land. The WWD now includes 614,700 acres of agricultural land (WWD 2024).

Due to its large area, favorable agricultural setting, and heavy reliance on groundwater, a significant volume of water has been pumped from the Westside Subbasin over the past 100 years. This pumping has resulted in land subsidence over a large portion of the Westside Subbasin, which in some areas is greater than 8 meters (U.S. Geological Survey [USGS] 2016). This subsidence was identified as early as the 1920s and has been monitored since the 1970s. Through the importation of surface water, groundwater pumping has been relieved to an extent, and some recharge of groundwater has been accomplished; however, due to a number of drought cycles since 1970, the reliance on groundwater has increased, and recharge has been reduced, if not temporarily eliminated (Sneed and Brandt 2015). The Sustainable Groundwater Management Act (SGMA) of 2014 established a framework for long-term protection of groundwater through careful resource evaluation and monitoring, instituting agency responsibility and accountability, and prioritizing basins by the state of the resource (DWR 2024). Under SGMA, high priority basins or subbasins that are categorized as critically overdrafted must submit an adopted groundwater sustainability plan (GSP) to the DWR. The Westside Subbasin has been designated by DWR as a high priority subbasin and is categorized as critically overdrafted; therefore, an approved GSP is required. The WWD was designated as the primary groundwater sustainability agency (GSA) responsible for the development of the GSP in the Westside Subbasin. The goal of the GSP is to help avoid undesirable results and help mitigate such results (Luhdorff and Scalmanini 2022). Undesirable results include the following effects caused by groundwater pumping:

- chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply;

- significant and unreasonable reduction of groundwater storage;
- significant and unreasonable seawater intrusion;
- significant and unreasonable degraded water quality;
- significant and unreasonable land subsidence; and
- depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

After 2030, groundwater allocations will be established by WWD based on well access to either, or both, the shallow (unconfined) or deep (confined) aquifer zones, except for certain Township, Range Section locations where the Corcoran Clay does not occur. The Project wells (located in Township 21 South, Range 17 E, Section 3) are located within the exempted area; as such, there is no distinction between upper or lower zones. Beginning in 2030, the WWD will implement management actions based on the projected status of groundwater levels in the Westside Subbasin (Tetra Tech 2025i). There are three status levels:

- *Green* – Occurs when groundwater levels in the Westside Subbasin are 50 percent or greater than the established Minimum Threshold in the Westside Subbasin. If green status is reached, groundwater users are allowed to pump up to 225 percent of the sustainable yield value (or 1.35 acre-feet per year [AFY] per gross acre).
- *Yellow* – Occurs when groundwater levels in the Westside Subbasin are between 15 percent and 50 percent of the established Minimum Threshold in the Westside Subbasin. If yellow status is assessed, groundwater users are limited to the current year allocation plus any carryover, transfers, or groundwater credit.
- Red – Occurs when groundwater levels in the Westside Subbasin are within 15 percent or less of established Minimum Thresholds in the Westside Subbasin. If red status is assessed, groundwater users may be limited to a smaller annual allocation, or (depending on their account status [i.e., water overdraft status or outstanding fee balance]) may not be eligible to pump.

3.10.2.4 Project Water Resource Availability

San Luis West Solar, LLC has acquired three parcels of land that are among the seven parcels to be used for Project development. Two of these parcels include deep groundwater supply wells whose water rights now belong to San Luis West Solar, LLC because the parcels are owned by San Luis West Solar, LLC (see Table 3.10-2). Each well has a peak production capacity of 2,000 Gallons per Minute (GPM).

Table 3.10-2. Well Service Areas

Parcel	Parcel (acres)	Project Area (acres)	Notes
Subarea A			
APN 085-050-1S	633	322	—

Table 3.10-2. Well Service Areas			
Parcel	**Parcel (acres)**	**Project Area (acres)**	**Notes**
APN 085-050-47S*	68	68	Includes Well #1
APN 085-050-48S*	77	77	—
APN 085-050-84S*	2	2	Includes Well #2
Subarea B			
APN 075-070-54S	298	298	—
Subarea C			
APN 078-060-85S	170	170	—
APN 078-080-55	155	155	—
Total	**1,403**	**1,092**	—

Notes: *Parcel owned by San Luis West Solar, LLC
APN = Assessor's Parcel Number

Source: Tetra Tech 2025i

Table 3.10-3 provides available information regarding the two water supply wells.

Table 3.10-3. Project Well Details		
Well Details	**Well #1**	**Well #2**
Location	APN 085-050-47S	APN 085-050-84S
Year Drilled	2014	2016
Drilling Records	Available	Available
Well Rehabilitation	None	None
Well Status	Active	Active
DWR Permit Number	WP 0033993	WP 0035637
Producing Casing Size	16 inches	16 inches
Depth (borehole)	1,430 feet	1,450 feet
Depth (casing)	1,420 feet	1,440 feet
Depth (of pump)	800 feet	800 feet
Depth (of screened interval)	810 feet to 1,420 feet	890 feet to 1,440 feet
Standing Water Level	478 feet (2014)	461 feet (2016)
Pump Size	400 horsepower	400 horsepower
Pump Type	Electric/Flowserve	Electric/Flowserve
Well Production	2,000 GPM	2,000 GPM

Table 3.10-3. Project Well Details		
Well Details	**Well #1**	**Well #2**
Well Development	None	Details available
Water Analysis	Yes	Yes

Notes: APN = Assessor's Parcel Number; DWR = California Department of Water Resources; GPM = Gallons per Minute

Source: Tetra Tech 2025i

The primary method for achieving the GSP sustainability goal is to establish a framework for limiting the annual volume of water pumped from individual wells and for monitoring the volumes of pumped groundwater. The limits placed on an individual well establish the annual volume of water for the acres attached to (serviced by) the well. Table 3.10-4 shows the annual volumes allowed per well, and the schedule for reduction of this amount to reach sustainable levels. Although the sustainable yield is the goal every year, during the transition period (until 2030), an additional transition allocation (as shown in Table 3.10-4) is allowed, raising the actual allocation (if needed) to the Allocation Cap. There are allowances for carrying over any unused transition allocation to the following year, with some limitations.

Table 3.10-4. WWD Annual Groundwater Allocation				
Year	**Allocation Cap**	**Transition Allocation**	**Sustainable Yield**	**Project Allocation* (AFY)**
	AFY per Gross Acre			
2022	1.3	0.7	0.6	—
2023	1.3	0.7	0.6	—
2024	1.2	0.6	0.6	—
2025	1.1	0.5	0.6	1,174
2026	1.0	0.4	0.6	1,067
2027	0.9	0.3	0.6	960
2028	0.8	0.2	0.6	854
2029	0.7	0.1	0.6	747
2030 to 2052	0.6	0.0	0.6	640

Notes: * Project allocation based on two wells, associated with a total area of 1,067 acres (see Table 3.10-2). AFY = acre-feet per year; GSA = groundwater sustainability agency; WWD = Westlands Water District;

Source: WWD-GSA 2023

3.10.2.5 Flooding

The Flood Insurance Rate Maps produced by the Federal Emergency Management Agency (FEMA) for Fresno County (County) show that the majority of the Project Area does not lie within a 100-year flood zone or any other special flood hazard zone, and that a portion of the Project Area is located within

Zone X, an area of minimal flood hazard risk (FEMA 2009). The remaining portion of the Project Area is located within Zone A, an area where there is a 1 percent chance of flooding occurring in a given year, but no base flood elevation has been determined.

3.10.3 Regulatory Setting

3.10.3.1 Federal

National Pollutant Discharge Elimination System Program Clean Water Act Section 402

Under Clean Water Act (CWA) Section 402, the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program controls water pollution by regulating point sources of pollution to Waters of the United States. The Central Valley RWQCB administers the NPDES program within the Project Area. Fresno County issues grading permits in conjunction with the Central Valley RWQCB.

3.10.3.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act gives the State Water Resources Control Board authority over waters of the State and water quality. The RWQCBs have local and regional authority. Pursuant to the CWA NPDES program, the Porter-Cologne Water Quality Control Act also delegates the authority to the RWQCBs to issue NPDES permits. If a proposed project or portion of a proposed project does not require a federal permit but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activity under its state authority in the form of Waste Discharge Requirements.

California Fish and Game Code Section 1602

The California Fish and Game Code, specifically under Section 1602, protects the natural flow, bed, channel, and bank of any river, stream, or lake under California Department of Fish and Wildlife (CDFW) jurisdiction. Applicants must submit a notification of lake or streambed alteration to the CDFW for any projects affecting the bed, bank, or flow of water considered to be under CDFW jurisdiction. The CDFW may issue a Lake and Streambed Alteration Agreement if it determines that the activity may substantially adversely affect fish and wildlife resources (CDFW 2024b).

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 is composed from a three-bill legislative package, including Assembly Bill 1739 (Dickinson), Senate Bill (SB) 1168 (Pavley), SB 1319 (Pavley), and subsequent statewide Regulations. The SGMA (Water Code Section 10723) provides a framework for sustainable management of groundwater resources. In groundwater basins designated by the California Department of Water Resources as medium and high priority, local public agencies and locally controlled groundwater sustainability agencies are required to develop and implement GSPs or alternatives to GSPs.

Water Quality Control Plan for the Tulare Lake Basin

The Central Valley RWQCB (Region 5) implements the Water Quality Control Plan for the Tulare Lake Basin through planning, permitting, and enforcement of established water quality objectives. The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River. In accordance with state policy for water quality control, Region 5 employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Tulare Lake Basin (Basin Plan) identifies beneficial uses for the key surface water drainages throughout its jurisdiction (RWQCB 2018).

The identified beneficial uses in the Westlands hydrologic unit (surface water) include agricultural and municipal water supply, groundwater recharge, recreation (contact and non-contact), and wildlife habitat.

3.10.3.3 Local

Fresno County General Plan

The Water Resources Section of the County's General Plan Open Space And Conservation Element describes policies that seek to protect and enhance the surface water and groundwater resources in the County. The policies address broad water planning issues, groundwater recharge, the relationship of land use decisions to water issues, and water quality problems (Fresno County 2024).

The following goals, policies, and programs related to water resources apply to the Project:

- *Goal OS-A.* To protect and enhance the water quality and quantity in Fresno County's streams, creeks, and groundwater basins.
    - *Policy OS-A.6: Groundwater Recharge Protection.* The County shall ensure that new development does not limit the capacity or function of groundwater recharge areas.
    - *Policy OS-A.11: Over-Irrigation of Surface Water.* The County shall permit and encourage, where economically, environmentally, and technically feasible, over-irrigation of surface water as a means to maximize groundwater recharge.
    - *Policy OS-A.14: Floodplain Protection.* The County shall require the protection of floodplain lands and, where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access, and recreation.
    - *Policy OS-A.20: Minimization of Sedimentation and Erosion.* 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: Best Management Practices.* The County shall continue to require the use of feasible and practical BMPs to protect streams from the adverse effects of construction activities and urban runoff.
- *Policy OS-A.24: Low Risk for Groundwater Degradation.* 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.

3.10.4 Impact Analysis

3.10.4.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, hydrology and water quality impacts would be considered significant if implementation of the Proposed Project would:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would:
  - result in substantial erosion or siltation on- or off-site;
  - substantially increase the rate or amount of surface run off 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;
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to the project inundation; or
- conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan.

3.10.4.2 Impact Discussion

Threshold 1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Construction

Construction would involve the use of heavy equipment (bulldozers, graders, semi-trucks, etc.) for vegetation removal, grubbing, grading, and installation of roads and other facilities. Construction activities would involve significant changes to topography within the Project Area, and such activities could potentially loosen existing surface soils and sediments, increasing the possibility that erosion might occur during storm events. Water used for dust suppression also has the potential to generate runoff that could transport sediments and dissolved solids. The use of construction equipment within the Project Area may involve the accidental release of fuel, oils, brake dust, lubricants, antifreeze, and other potentially hazardous substances. These water quality pollutants could be delivered to surface waterbodies during storm events, and/or be infiltrated into groundwater and the underlying aquifer, resulting in the degradation of water quality. Grading for drainage and stormwater retention basins would be conducted per County-approved grading and drainage plans. As described in Section 3.9, there are no LUSTs, or Cleanup Program sites documented in the Project Area or in the vicinity, such that encountering aboveground and/or subsurface contamination is not anticipated during construction. Similarly, it is not expected that abandoned water wells and/or abandoned septic systems exist within the Project Area. If any abandoned water wells or septic systems are found during construction, the Applicant shall retain a licensed contractor to property destroy those abandoned facilities.

As a result of these concerns, the Project would be subject to compliance with the NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit would include the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The objectives of a SWPPP are (1) to identify pollutant sources that may be delivered offsite (in the form of runoff) and affect the quality of stormwater discharge; (2) to implement site controls and practices to reduce stormwater pollution; and (3) to protect the water quality of receiving waters. The SWPPP would include site-specific Best Management Practices (BMPs) to minimize erosion within the Project Area and reduce or otherwise prevent conditions of erosion and stormwater runoff.

As previously described, diesel and gasoline fuels and other hazardous materials, such as oils, solvents, hydraulic fluids, and paints commonly associated with construction equipment, would be stored and handled in a manner to prevent accidental release (i.e., consistent with the hazardous materials handling BMPs, Spill Prevention, Control, and Countermeasure Plan (SPCC), and other measures contained within the required SWPPP). Additionally, facilities that would use and/or store hazardous materials and/or hazardous wastes shall meet the requirements set forth in the California Health and Safety Code (HSC), Division 20, Chapter 6.95, and the California Code of Regulations (CCR), Title 22, Division 4.5.

By complying with General Construction Permit implementation requirements, which would include the preparation and deployment of a SWPPP, SPCC Plan, and associated BMPs, and compliance with

applicable laws such as the HSC and CCR, as detailed above, water quality impacts during construction would be temporary and less than significant.

Operations

After Project construction is completed and final stormwater management facilities are in place, the implemented runoff controls would maintain or improve the existing runoff conditions within the Project Area, and stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would be implemented. The rip-rap cutoff trenches would be constructed perpendicular to natural drainage directions to control erosion in major drainage corridors.

As discussed in Section 3.9, the California Hazardous Materials Release Response Plans and Inventory Law requires any business handling hazardous materials at or above specified thresholds to prepare an HMBP. The thresholds include any site that stores hazardous materials in excess of 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet for compressed gas. Any hazardous materials exceeding the established thresholds that would be stored within the Project Area would be contained in designated areas in accordance with an HMBP, which would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to prevent accidental release. For these reasons, the impacts to water quality during Operations and Maintenance (O&M) would be temporary and less than significant.

Decommissioning

After the useful life of the Project is completed, decommissioning of the facility would result in similar potential impacts as those described for construction, including the potential for erosion, sedimentation, and the release of pollutants; as such, activities anticipated during decommissioning would be required to comply with the same applicable federal, state, and local water quality regulations. Prior to Project decommissioning and site restoration, the Project would require a County-approved grading plan in conjunction with the Project-specific Reclamation Plan. Ground disturbing activities during decommissioning would require coverage under the Construction General Permit, including the preparation and implementation of a SWPPP. Stormwater management measures would be required to be identified and implemented to effectively control erosion and sedimentation and other construction-related pollutants during decommissioning. For these reasons, the potential impact of Project decommissioning activities on water quality would be temporary and less than significant.

Threshold 2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The Project would require a water supply during the 9-month construction and 12-month decommissioning phase, as well as a long-term water supply for the 35-year operational period. Construction-related water requirements would be primarily associated with dust suppression and soil compaction during ground-disturbing activities. Frequency of watering of activities areas would be determined by the type of activity, site-specific soil conditions, and wind conditions. Temporarily stockpiled soils would be watered to stabilize them. Non-potable water may be needed to establish

vegetation or distribute earth-binding materials to disturbed areas as construction is completed. During construction, potable drinking water would be trucked in from outside of the Project Area (most likely as bottled water) (Tetra Tech 2025i).

Availability of water for fire suppression would be necessary for construction activities as well as during operations and decommissioning. The existing, onsite 3,250,000-gallon capacity storage pond would have water available at the beginning of the construction period and would be refilled with water periodically for all construction water needs, including fire suppression. The pond would need to be replenished periodically (estimated at about 2.92 acre-feet (AF), or 950,000 gallons, per month) with water pumped from the wells. This pond would remain in place as part of the Project infrastructure for the operational period and the decommissioning period (Tetra Tech 2025i).

During Project operation, water requirements would be primarily associated with periodic cleaning of the photovoltaic (PV) modules (solar panels). The frequency of solar panel washing activities would depend upon site-specific conditions such as wind and rain. The water demand rate is estimated for a washing cycle per solar panel, multiplied by the total number of solar panels. It is assumed that solar panel washing would take place twice per year. The average water use for solar panel washing during operation and maintenance of the facility would be minimal, estimated at about 0.5 AFY for a total demand of 18 AF (Tetra Tech 2025i).

Table 3.10-5 summarizes the estimated water requirements for the Proposed Project.

Table 3.10-5. Estimated Project Water Demand

Project Phase	Annual Demand (AFY)	Total Demand (AF)
Construction (Duration: 1 year)[1]		
Dust suppression	100	75
Soil compaction and grading	20	15
Fire suppression[2]	36	27
Total Construction	**156**	**117**
Operation and Maintenance (Duration: 35 years)[3]		
Panel Washing[4]	0.5	18
Fire suppression[5]	36	1,260
Total O&M	**36.5**	**1,278**
Decommissioning (Duration: 1 year)[6]		
Dust suppression	100	75
Fire suppression	36	27
Total Decommissioning	136	102
Total Demand	**—**	**1,599**
Amortized Demand[7]	**43.8**	**—**

Table 3.10-5. Estimated Project Water Demand		
Project Phase	**Annual Demand (AFY)**	**Total Demand (AF)**

Notes:

[1] Construction period is presumed to be 9 months. The full Project construction water demand will occur over this period. The total construction-period water demand is assumed to be 120 acre-feet regardless of the duration of construction. A longer construction period would result in a lower monthly construction demand.

[2] Plan to have about 3,250,000 gallons of water available in the onsite pond for emergency fire suppression needs in addition to other uses. The annual value represents the replenishment water needed to keep the pond approximately filled to capacity assuming annual losses to infiltration (27 AF) and evaporation (9 AF).

[3] O&M period is assumed to be 35 years. The 35-year period is considered for full disclosure and conservative analysis; this table presents all anticipated water demands of the Project over the entirety of its anticipated operational lifespan. During O&M, primary activities that require water supply are washing solar panels and emergency fire suppression. As currently planned, there will be no plumbing requirements for the O&M building to provide water or sanitary service.

[4] Estimated solar PV panel washing requirement is approximately 0.5 AFY.

[5] The surface water storage pond (3,250,000-gallon capacity) will remain after construction primarily for emergency fire suppression supply. It will be filled regularly over the 35-year operational period to replace water lost to evaporation and infiltration.

[6] Decommissioning activities for the proposed Project are not specifically known at this time; therefore, in order to provide a conservative analysis that accounts for all Project phases, this analysis assumes that the Project's decommissioning period would be similar to the construction period, without soil compaction or grading.

[7] The amortized demand of 43.8 AFY is the Project's total estimated water demand (1,599 AF) averaged over the cumulative duration of all Project phases (36.5 years, rounding for one year each of construction and decommissioning, and 35 years of operation and maintenance).

AF = Acre-feet; AFY = Acre-feet per year; O&M = Operations and Maintenance

Source: Tetra Tech 2025i

The Project's water demand would be met in full by groundwater from two wells, each located on a separate parcel that is incorporated into the Project Area. These wells pump groundwater from the Westside Subbasin. Groundwater produced from these wells is subject to the requirements of the GSP (Luhdorff and Scalmanini 2022) and Article 1 (WWD-GSA 2023), which provides the rules and regulations for implementing these requirements. The Project would not directly use imported surface water from the SWP through the WWD.

. One of the management actions to improve Westside Subbasin conditions and return to a sustainable use level while concurrently improving aquifer storage and recovery is to implement an allocation system that slowly reduces allowable pumping volumes over time to return to a sustainable yield; this is accomplished through restrictions placed on individual wells within the WWD service area starting in 2022 and ending in 2030 (Luhdorff and Scalmanini, 2022).

The Project would supply its water needs from the two Project wells with an allocation cap of 1,067 acre-feet (AF) for the 2026 construction year. This allocation cap is more than the expected construction water demand of approximately 156 AF (see Table 3.10-4). Also, the final allocation cap for years 2030 through 2052 of 640 AF is significantly greater than the expected annual water demand of 36.5 AF that is projected

for the 35-year operation period of the Project, and 136 AF of demand for the year of decommissioning (2053). In addition, during its life, the Project would eliminate the use of over 23,700 AF of groundwater because the current agricultural uses of the Project Area would end when construction begins (Tetra Tech 2025i).

Because the Project has acquired three parcels of land that include the rights to two existing water-supply wells, the Project would be replacing an existing water user and would not be creating a new or additional demand on the groundwater resource in the Westside Subbasin. Additionally, the Proposed Project water needs would be within the allocation cap for the acquired parcels.

The reliability of the water supply within the WWD service area has been projected through the year 2070 for both the land surface system and the groundwater system (Luhdorff and Scalmanini 2022). These projections considered the effects of drought years and non-drought years to help establish what can be accepted as the sustainable yield for groundwater from the Westside Subbasin. Implementation of the Project would convert the existing land use within the Project Area from agricultural (with irrigation) to solar energy production, which would require far less water than the current land use. Such a land use conversion would improve the prospects for water supply reliability by lowering the water demand on this land.

The Project would increase the amount of impervious surface; however, the majority of the Project Area would remain pervious. In addition, the runoff conditions currently occurring within the Project Area would be maintained or improved, thereby retaining or improving current groundwater recharge conditions. For these reasons, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin; therefore, impacts would be less than significant.

Threshold 3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would:

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

ii) substantially increase the rate or amount of surface run off in a manner which would result in flooding on- or off-site?

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

iv) impede or redirect flood flows?

Construction

The Proposed Project would include minimal excavation and grading during site preparation, and such excavation and grading would alter existing drainage patterns within the Project Area; however, the Project would be designed so that the control of runoff would be maintained or improved over the runoff conditions currently occurring within the Project Area prior to construction.

As previously discussed, the Proposed Project would implement a SWPPP that would require preservation of existing topography to the maximum extent feasible and include erosion and sediment control BMPs designed to prevent erosion and sedimentation or any other sources of polluted runoff from occurring on or offsite during Project construction. These BMPs would also prevent flooding during construction by reducing the energy of water flow within the Project Area and slow the flow of water, enabling the water to infiltrate into the subsurface as it does now.

The Project would also require a grading permit to ensure that the Project is consistent with the General Plan, California Fire Safety Standards, and applicable Fresno County Ordinances in addition to the California Building Code.

For these reasons, impacts would be less than significant.

Operation

The potential for erosion and sedimentation during Project operation caused by increased runoff from impervious surfaces would be very limited. The implemented stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would maintain or improve the existing runoff conditions within the Project Area. Also, a large amount of pervious ground surface would remain during Project operation, and these surfaces would continue to absorb the majority of rainfall and runoff. The Project would require a County-approved, engineered grading and drainage plan in lieu of a final drainage plan prior to the issuance of a grading permit. This plan would demonstrate that the Project Area has been designed to minimize potential increases in runoff. Stormwater management features would be consistent with existing regulatory requirements and would minimize erosion or sedimentation and flood flows to less than significant levels.

With compliance with the Project SWPPP, drainage plan, and applicable regulations, impacts would be less than significant.

Threshold 4: Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to the project inundation?

The FEMA Flood Insurance Rate Maps for Fresno County show that the majority of the Project Area is not located within a 100-year flood zone or any other special flood hazard zone, and that a portion of the Project Area is located within Zone X, an area of minimal flood hazard risk (FEMA 2009). The remaining portion of the Project Area is located within Zone A, an area where there is a 1 percent chance of flooding occurring in a given year, but no base flood elevation has been determined. These areas would be avoided for placement of Project facilities. The Project Area is not located in the coastal zone, or near a large body of water that could be susceptible to seiches, or in a flood hazard zone identified by FEMA; therefore, there is no risk of inundation associated with such hazards. The Project would require completion of a certified Map of Survey/Map of Flood Hazard Area (MOS) that would be stamped and signed by a Professional Land Surveyor. Furthermore, compliance with the provisions established in Fresno County Ordinance Code Title 15, Chapter 15.48 Flood Hazard Areas for the proposed development within the Special Flood Hazard Area shall be implemented. For these reasons, the Proposed Project would have no impact regarding the release of pollutants due to Project inundation.

Threshold 5: Would the project conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?

The Project would be regulated under the Basin Plan for the Tulare Lake Basin (RWQCB 2018). Neither the nature of the Project nor the type of development proposed would be likely to conflict with the Basin Plan or obstruct implementation of its provisions. In addition, by adhering to the conditions stipulated by the SWPPP and the NPDES permits for the Project, water quality impacts would not result in violations to, conflicts with, or obstructions of the Basin Plan; therefore, impacts related to this water quality control plan would be a less than significant

It is anticipated that the Project's water demand would be met in full by groundwater from two wells, each located on a separate parcel that is incorporated into the Project Area. Groundwater produced from these wells is subject to the requirements of the GSP and Article 1 (WWD-GSA 2023), which provides the rules and regulations to implement these requirements.

The recently approved GSP for the Westside Subbasin has established a long-term plan for reducing the annual amount of groundwater withdrawn for the entire Tulare Lake Basin. This will be accomplished by limiting the amount of groundwater allowed to be withdrawn from individual wells, based on the number of acres a well serves. The amount of groundwater pumping allowed (the allocation cap) will be reduced over a transition period that began in 2022 and will end in 2030. At the end of the transition period, the allocation cap will result in a sustainable yield from the Westside Subbasin for the long-term. Because the Project has acquired three parcels of land that include the rights to two existing wells, the Project would replace an existing water user, and would not create a new or additional demand on the groundwater resource in the Westside Subbasin. In addition, Project water usage would be within the allocation cap for the acquired parcels. For these reasons, the Project would not conflict with or obstruct the existing GSP, and impacts would be less than significant.

3.10.5 Mitigation Measures

No mitigation is required.

3.10.6 Level of Significance after Mitigation

Project-related impacts associated with hydrology and water quality would be less than significant.

3.11 Land Use Planning

This section describes the affected environment and regulatory setting of the Proposed Project for impacts that may affect land use and planning. Impacts to land use and planning are considered significant if the Proposed Project would: (1) physically divide an established community; or (2) cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.11.1 Environmental Setting

Fresno County is divided into five geographic subareas: the Coast Range Foothills Area, Westside Valley Area, Eastside Valley Area, Sierra Foothill Area, and the Sierra Nevada Mountain Area. The Proposed Project is located within the County's Westside Valley Area, which is adjacent to I-5 and stretches eastward to Fresno Slough. Land use in this subarea is primarily agriculture and open space.

Fresno County's primary land use is agriculture; farming and agricultural processing and production serve as the County's economic driver. The County's rural communities and small towns provide services and housing for the agricultural workforce and are supported by infrastructure such as irrigation systems, processing facilities, and storage silos (Fresno County 2024).

The Proposed Project is located on privately-owned land that has been historically used for agriculture. The Project Site is designated as *Agriculture* in the Fresno County General Plan and is zoned *Exclusive Agriculture (AE)* in accordance with Fresno County's Zoning Classification. The *Agriculture* designation provides for the production of crops and livestock, and for the location of necessary agricultural commercial centers, agricultural processing facilities, and certain non-agricultural activities. Within the *Exclusive Agriculture* zoning districts, Fresno County permits utility-scale solar energy uses with an Unclassified Conditional-Use Permit (CUP). The Unclassified CUP pre-application process was initiated for the Project in October 2023, and a signed pre-application form was provided to the Applicant on November 6, 2023.

According to data from the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project Site includes lands identified as *Prime Farmland* (1,091 acres) and subject to the Williamson Act; it also includes some smaller areas designated as *Non-Prime Agricultural Land* (6 acres) and *Vacant or Disturbed Land* (3 acres). According to the Natural Resources Conservation Service's Web Soil Survey, the Project Site includes four types of soil, three of which are considered *Prime Farmland* if irrigated. The surrounding land uses consist primarily of agriculture.

The nearest airport to the Project Site is the New Coalinga Municipal Airport, which is located approximately 9.5 miles to the west. The nearest major airport is the Fresno Yosemite International Airport, which is more than 40 miles from the Project Site. The nearest military facility is Naval Air Station Lemoore, approximately 11 miles to the northeast. According to the County of Fresno Federal Emergency Management Agency (FEMA) map, all Project infrastructure is located outside of FEMA flood-hazard zones.

3.11.2 Regulatory Setting

3.11.2.1 Federal

There are no applicable federal regulations for this issue area.

3.11.2.2 State

There are no applicable state regulations for this issue area.

3.11.2.3 Local

Fresno County General Plan

The Fresno County General Plan's Agriculture and Land Use Element describes the County's Land Use Diagram and related development standards for unincorporated land within the County, in addition to setting goals, policies, and implementation programs for resource lands (including agriculture), rural development (non-agriculture), urban development, and administration (Fresno County 2024). The General Plan's goals and policies that are relevant to the Proposed Project are listed below:

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

- *Policy LU-A.1: Agricultural Land Conservation.* The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.
- *Policy LU-A.2: Agriculture-related Uses.* The County shall allow by right in areas designated Agriculture activities related to the production of food and fiber and support uses incidental and secondary to the onsite agricultural operation. Uses listed in Table LU-3 (in the General Plan) are illustrative of the range of uses allowed in areas designated Agriculture.
- *Policy LU-A.3: Special Agricultural Uses.* The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculture-related activities, including value added processing facilities, and certain non-agricultural uses listed in Table LU-3 (in the General Plan). Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria:
  - The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
  - The use should not be sited on productive agricultural lands if less productive land is available in the vicinity;

- The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter mile radius;
- A probable workforce should be located nearby or be readily available;
- For proposed agricultural commercial center uses the following additional criteria shall apply:
  - Commercial uses should be clustered in centers instead of single uses.
  - To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of 4 miles from any existing or approved agricultural or rural residential commercial center or designated commercial area of any city or unincorporated community.
  - New commercial uses should be located within or adjacent to existing centers.
  - Sites should be located on a major road serving the surrounding area.
  - Commercial centers should not encompass more than one-quarter mile of road frontage, or one-eighth mile if both sides of the road are involved, and should not provide potential for developments exceeding 10 separate business activities, exclusive of caretakers' residences.
- For proposed value-added agricultural processing facilities, the evaluation under criteria "a" above, shall consider the service requirements of the use and the capability and capacity of cities and unincorporated communities to provide the required services; and
- For proposed churches and schools, the evaluation under criteria LU-A.3a above shall include consideration of the size of the facility. Such facilities should be no larger than needed to serve the surrounding agricultural community.
- When approving a discretionary permit for an existing commercial use, the criteria listed above shall apply except for LU-A.3b, e2, e4, and e5.

- *Policy LU-A.13: Agricultural Buffers.* 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: Agricultural Land Conversion Review.* 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

The Project is within the AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) and AE-40 (Exclusive Agriculture, 40-acre minimum parcel size) zoning districts. Fresno County Zoning Ordinance Code Section

816.2.D identifies electrical transmission substations and electric distribution substations as permitted uses, subject to approval of a Director Review and Approval Application (Fresno County 2004). Solar facilities are not specified as allowed uses in the AE-20 or AE-40 zoning code; however, the County processes photovoltaic solar facility projects. Within these zoning districts, the County permits utility-scale solar energy uses with an Unclassified CUP.

Fresno County Solar Facility Guidelines

The Solar Facility Guidelines were adopted by the Fresno County Board of Supervisors on December 12, 2017. The guidelines provide a list of information and standards for applicants for solar facilities to address as part of the application review process (Fresno County 2017). The portion of those guidelines relevant to this land use and planning discussion are as follows:

- Information shall be submitted regarding the historical agricultural operational/usage of the parcel, including specific crop type and crop yield, for the last 10 years (if no agricultural operation in the last 10 years, specify when land was last in agricultural use).
- Information shall be submitted that identifies the source of water for the subject parcel (surface water from irrigation district, individual well(s), and conjunctive system). If the source of water is via district delivery, the applicant shall submit information documenting the allocations received from the irrigation district and the actual disposition of the water (i.e., utilized on-site or moved to other locations) for the last ten years. If an individual well system is used, provide production capacity of each well, water quality data and data regarding the existing water table depth.
- Identify the current status of the parcel (Williamson Act contract, conservation easement, retired land, etc.), the purpose of any easement and limitations of the parcel. The applicant shall submit a Title Report or Lot Book Guarantee for verification.
- The applicant must acknowledge the County's Right-to-Farm Ordinance and shall be required to record a Right-to-Farm Notice prior to issuance of any permits. This shall be included as a recommended condition of approval of the land use entitlement.

3.11.3 Impact Analysis

3.11.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, land use and planning impacts are considered significant if implementation of the Proposed Project would:

- physically divide an established community; or
- cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.11.3.2 Impact Discussion

Threshold 1: Would the project physically divide an established community?

The Proposed Project would be developed on privately-owned, undeveloped land that has been historically used for agriculture. The surrounding area is primarily used for agriculture. The nearest populated community is the City of Huron, which is located approximately 3 miles north of the Project Site. Given the distance of this community from the Project Site, the Proposed Project would not physically divide or restrict access to the City of Huron or any other community; therefore, no impact would occur.

Threshold 2: Would the project 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?

The Fresno County General Plan, Fresno County Zoning Ordinance, and Fresno County Solar Facility Guidelines establish land use policies and regulations that are applicable to the Proposed Project. The following discussion evaluates the conformity of the Proposed Project to these plans, policies, and regulations.

Consistency with General Plan

One of the main land use goals of the General Plan is to promote the long-term conservation of productive and potentially productive agricultural lands, and to accommodate agricultural-support services and agriculturally related activities that support the viability of agriculture and further the County's economic development goals (Goal LU-A). The Proposed Project would temporarily convert a large acreage of Prime Farmland that has been actively farmed to a solar facility; therefore, it not consistent with this goal and the policies related to it. However, Land Use Policy LU-A.12 states that the County shall support and promote the use of renewable energy resources and technologies, such as solar energy, in appropriate locations within agricultural areas to ensure compatibility with agricultural operations. The Project would be included in this policy.

As detailed in the Project's Reclamation Plan, all disturbed soil surfaces will be prepared for return to agricultural use. These areas will be restored to a condition and forage density similar to the original condition. In all areas, restoration will include, as reasonably required, leveling, terracing, mulching, and other necessary steps to prevent soil erosion.

Because the Proposed Project has been designed in accordance with Fresno County regulations and would facilitate a return to agricultural uses after the life span of the Project, impacts related to conflicts with land use policies in the General Plan would be less than significant.

Consistency with Zoning Ordinance

The Project parcels and all easement parcels are zoned *Exclusive Agriculture (AE)* in accordance with Fresno County's Zoning Classification. Fresno County permits utility-scale solar energy uses with an Unclassified CUP within AE zoning districts. Compliance with the conditions of approval for the

Unclassified CUP would ensure that the Proposed Project does not conflict with zoning requirements; therefore, impacts related to conflicts with zoning would be less than significant.

Consistency with Solar Facility Guidelines

Fresno County's Solar Facility Guidelines set forth the County's policies for solar project development. The purpose of the guidelines is to help balance the development of solar projects with the need to "protect important farmlands and minimize impacts to existing agricultural operations." (Fresno County 2017)

The Proposed Project is designed with a buffer between the solar facility and adjacent agricultural fields. In compliance with the Solar Facility Guidelines, the Applicant will acknowledge the County's Right to Farm Ordinance and will record a Right to Farm Notice. To facilitate a return to agricultural uses after the life span of the Project, a reclamation plan has been prepared detailing the removal of Project improvements and specific measures to return the Project Site to its pre-construction condition (Appendix C). Therefore, impacts related to conflicts with Solar Facility Guidelines would be less than significant.

3.11.4 Mitigation Measures

No mitigation is required.

3.11.5 Level of Significance after Mitigation

Impacts would be less than significant.

3.12 Mineral Resources

3.12.1 Introduction

This section describes the environmental and regulatory setting for mineral resources. Included is a review of existing conditions, a summary of applicable policies and regulations related to mineral resources, and an analysis of the environmental impacts associated with construction and operation of the Proposed Project. Impacts to mineral resources are considered significant if the Proposed Project would (1) result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or (2) result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

3.12.2 Environmental Setting

Fresno County (County) extracts a multitude of minerals resources due to the abundance and variety of such resources available throughout the County. Mineral resources commonly extracted in Fresno County include sand and gravel; oil and coal; copper, gold, mercury, tungsten; and other minerals used for industrial applications or construction.

The nearest mine to the Project Area is Sierra Pacific Materials, which is a sand and gravel mine located approximately 6.6 miles southwest of the Project Area.

As stated in the General Plan Background Report (Fresno County 2023), the State Department of Conservation, Division of Mines and Geology defines Mineral Resource Zones (MRZs) as regional areas that contain significant mineral resources. The Mineral Resource Zones are divided into four classifications as follows:

- MRZ-1: an area where adequate information indicates there are no significant mineral deposits present, or where the is little likelihood for mineral deposit presence.
- MRZ-2: an area with adequate information that indicates significant mineral deposits are present and/or a high likelihood for mineral deposit presence.
- MRZ-3: an area of undetermined mineral resource significance based on available data which may suggest or infer mineral occurrence.
- MRZ-4: an area of unknown mineral resource significance or no known mineral occurrence.

The Proposed Project Area is not within an MRZ.

3.12.3 Regulatory Setting

3.12.3.1 Federal

There are no applicable federal regulations for this issue area.

3.12.3.2 State

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code [PRC], Sections 2710 to 2796) regulates surface mining operation to assure that adverse environmental impacts are minimized, and that mined lands are reclaimed to a usable condition. SMARA encourages the production, conservation, and protection of the state's mineral resources, recognizes that "the state's mineral resources are vital, finite, and important natural resources and the responsible protection and development of these mineral resources is vital to a sustainable California" (PRC Section 2711), and requires the State Geologist to classify land into MRZs according to its known or inferred mineral potential. The primary goal of mineral land classification is to ensure that Local agencies use the classification information when developing land use plans and when making land use decisions that could preclude mining (California Department of Conservation 2024). MRZs are defined in detail in the Environmental Setting section, above.

3.12.3.3 Local

The following lists the applicable goal and policies from the Fresno County General Plan (Fresno County 2024) pertaining to mineral resources.

- *Goal OS-C:* To conserve areas identified as containing significant mineral deposits and oil and gas resources for potential future use, while promoting the reasonable, safe, and orderly operation of mining and extraction activities within areas designated for such use, where environmental, aesthetic, and adjacent land use compatibility impacts can be adequately mitigated.
    - *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-C.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 prelude future extraction of those resources.

3.12.4 Impacts Analysis

3.12.4.1 Thresholds of Significance

The Fresno County CEQA Implementation Document and Fresno County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a Project could potentially have a significant adverse effect on mineral resources.

A Project could have a significant adverse effect on mineral resources if it would:

- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

- result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

3.12.4.2 Impact Discussion

Threshold 1: Would the project 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?

The Project Area and adjacent properties are not located on lands designated as MRZs by the State. In addition, there are no active mines or petroleum extraction facilities located within or adjacent to the Project Area. The nearest active mine, Sierra Pacific Materials, is approximately 6.6 miles to the southwest. Thus, the Proposed Project would not interfere with nearby mine sites and would not result in the loss of land designated for mineral resources. Construction and operation of the Proposed Project would not interfere with mineral extraction and processing and would not have significant impacts on future mineral development. Based on the absence of historical surface mining in the immediate area, the potential for surface mining at the Project Area is considered extremely low. Therefore, the Project would not result in the loss of availability of a known mineral resource. No impact would occur.

Threshold 2: Would the project 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?

The Project Area is not located on a locally important mineral resource recovery site delineated by the Fresno County General Plan (Fresno County 2024). While there are nearby mineral resource recovery sites, the operation of these sites would not be impeded by the development of the Proposed Project. Therefore, the installation of the solar facilities would not preclude future mineral resource development, nor would it result in the loss of a locally important mineral resource recovery site. Construction and operation of the Proposed Project would not interfere with mineral extraction and processing and would not have any impacts on future mineral development. No impact would occur.

3.12.5 Mitigation Measures

There would be no impacts; therefore no mitigation measures are required.

3.12.6 Level of Significance after Mitigation

There would be no impacts.

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3.13 Noise

3.13.1 Introduction

This section describes the affected environment and regulatory setting of Proposed Project related to noise. Noise impacts are considered significant if the Proposed Project would (1) result in generation of excess groundborne vibration or groundborne noise levels or (2) For a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people be residing or working in the project area to excessive noise levels.

The analysis is based on the following technical document included as an appendix:

- Sound Analysis Report, San Luis West Solar Project (Tetra Tech 2025j; Appendix M).

3.13.2 Environmental Setting

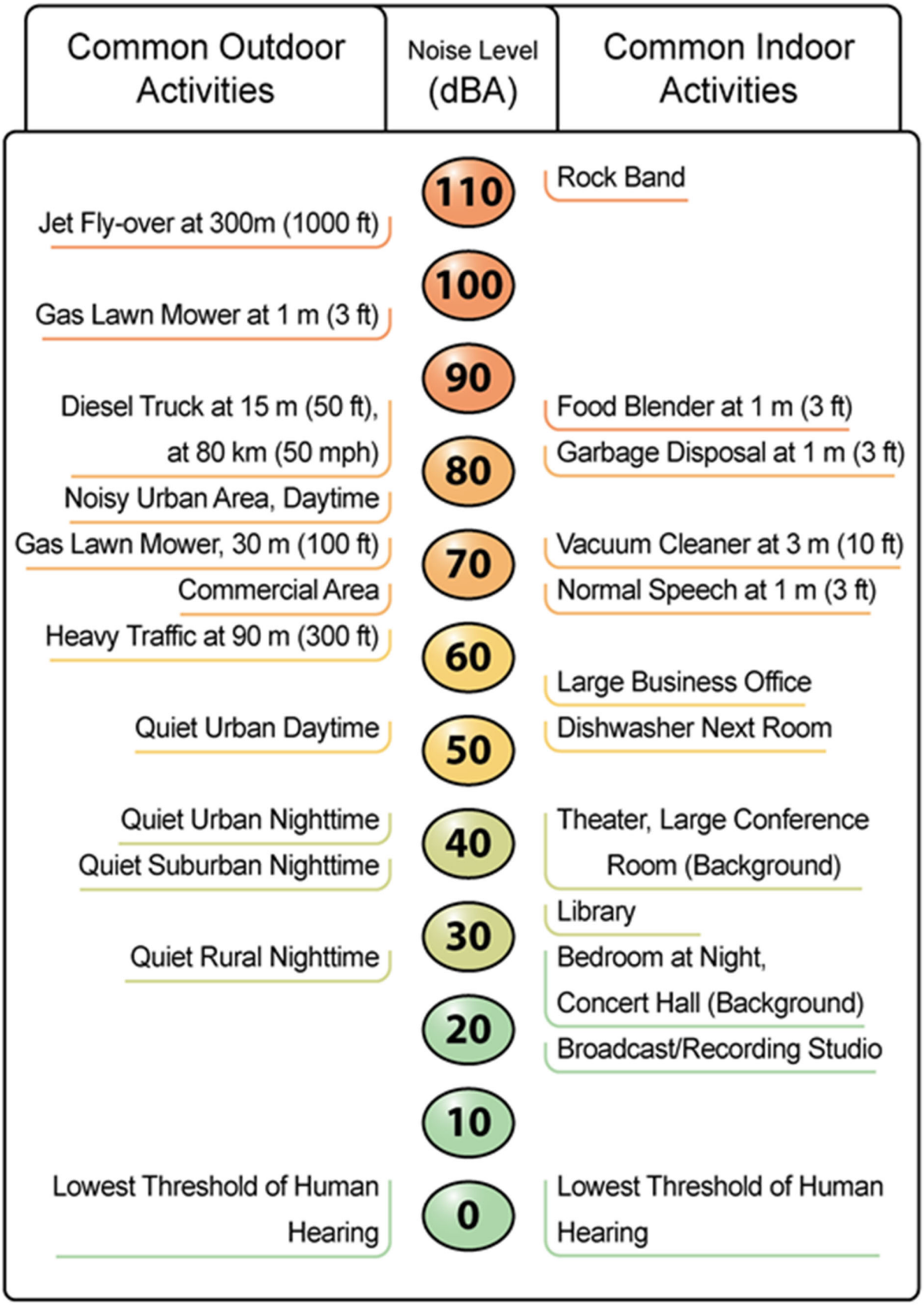
3.13.2.1 Fundamentals of Sound and Environmental Noise

Addition of Decibels

The decibel (dB) scale is logarithmic, not linear; therefore, sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels that are 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound and twice as loud as a 60 dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the dB scale, three sources of equal loudness together would produce an increase of 5 dB. Typical noise levels associated with common noise sources are depicted in Figure 3.13-1. As shown in Figure 3.13-1, city traffic and diesel trucks at a distance of 50 feet have a noise level of 90 dBA, whereas heavy traffic at a distance of 300 feet has a noise level between 60 and 70 dBA.

Noise Descriptors

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (L_{eq}) and the average daily noise levels/community noise equivalent level (L_{dn}/CNEL); L_{eq} is a measure of ambient noise, whereas L_{dn} and CNEL are measures of community noise. Table 3.13-1 summarizes common acoustical descriptors.



Source: California Department of Transportation (Caltrans) 2020a

Figure 3.13-1. Common Noise Levels

These descriptors are applicable to this analysis and are defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. As such, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10 dBA *weighting* added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5 dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Table 3.13-1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.

Table 3.13-1. Common Acoustical Descriptors	
Descriptor	**Definition**
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The dBA scale gives greater weight to the frequencies of sound that the human ear is most sensitive to. Because sound levels can vary significantly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within approximately 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within approximately 1 to 2 dBA.

Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB (dBA) for each doubling of distance from a stationary or point source (Federal Highway Administration [FHWA] 2017a). Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (FHWA 2017a). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed. For line sources, an overall attenuation rate of three dB per doubling of distance is assumed (FHWA 2017a).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 5 to 10 dBA (FHWA 2017b). According to the FHWA (2017b), noise barriers can reduce noise levels by 15 dBA in certain instances, yet this level of noise reduction is very difficult to achieve. To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the *line of sight* between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the *line of sight* between the source and the receiver.

The manner older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (California Department of Transportation [Caltrans] 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. 2006). Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typical residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations). In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments experiencing less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

Human Response to Noise

General Well-Being

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high above

70 dBA. Examples of low daytime levels include isolated natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments include urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1.0 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3.0 dBA change is considered a just-perceivable difference.
- A change in level of at least 5.0 dBA is required before any noticeable change in community response is expected. An increase of 5.0 dBA is typically considered substantial.
- A 10.0 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Hearing Loss

Although physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss can occur at the highest noise intensity levels. It occurs mainly due to chronic exposure to excessive noise but may be caused by a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

3.13.2.2 Fundamentals of Environmental Groundborne Vibration

Vibration Sources and Characteristics

Vibration is an oscillatory motion that is described in terms of displacement, velocity, or acceleration. Velocity is the most common descriptor used when evaluating human perception or structural damage. Velocity represents the instantaneous speed of movement and more accurately describes the response of humans, buildings, and equipment to vibrations.

Ground vibration can be measured in several ways to quantify the amplitude of vibration produced, including through Peak Particle Velocity (PPV) or root mean square velocity. These velocity measurements measure the maximum particle at one point or the average of the squared amplitude of the signal, respectively. However, to evaluate annoyance to humans, the vibration dB (VdB) notation is commonly used. The decibel notation acts to compress the range of numbers required to describe vibration. In the

United States, the accepted velocity reference for converting to dB is 1x10-6 inches per second. The abbreviation "VdB" is used for vibration dB to reduce the potential for confusion with sound decibels.

Vibration Effects

Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise that causes induced vibration in exterior doors and windows. Table 3.13-2 summarizes the reactions of people and the effects on buildings produced by continuous vibration levels as outlined in Caltrans' *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020a).

Table 3.13-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/ second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006 to 0.019	64 to 74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.5	103	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: California Department of Transportation 2020b

Ground vibration can be a concern in instances where buildings shake and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks typically generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under normal circumstances, which as identified in Table 3.13-2, is considered very unlikely to cause damage to buildings of any type. Common sources of groundborne vibration are planes,

trains, and construction activities such as earthmoving, which requires the use of heavy-duty earthmoving equipment.

3.13.2.3 Existing Ambient Noise Environment

Existing Sound Environment

There are multiple sound sources that surround the Project, including a large substation, multiple solar facilities, and Interstate 5. Other sources of sound relative to the Project location can be attributed to agriculture operations. The Project and closest noise sensitive areas (NSAs) are located in Huron, California, which has a population density of 4,655 people per square mile (U.S. Census Bureau 2020). Using the FTA noise guidelines (FTA 2018) the ambient noise at the nearest NSA is 59 dBA L_{dn}, which is approximately a daytime level of 59 dBA L_{eq} and nighttime level of 50 dBA L_{eq}.

Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include 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 due to the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project Area is located in unincorporated Fresno County bounded by West Gale Avenue to the north, the California Aqueduct to the east, West Jayne Avenue to the south, and agricultural land to the west. The Project Area is located just over 3 miles due east of Pacific Gas & Electric Company's Gates Substation, which is located at the intersection of South Trinity Avenue and West Jayne Avenue. The nearest NSA is located approximately 275 feet west of the Project Area along West Jayne Avenue.

3.13.3 Regulatory Setting

3.13.3.1 Federal

Occupational Safety and Health Act of 1970

OSHA regulates onsite noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 dBA over an 8-hour work shift (29 Code of Federal Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels that exceed 85 dBA. These programs include providing hearing protection devices and testing employees for hearing loss on a periodic basis.

3.13.3.2 State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise that affects classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California *General Plan Guidelines* (Office of Planning and Research [OPR] 2003) published by the OPR also provides guidance for the acceptability of projects within specific L_{dn}/CNEL contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The OPR *Noise Element Guidelines* include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. Table 3.13-3 describes the compatibility of land uses with a range of environmental noise levels in terms of the CNEL.

Table 3.13-3. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential - Multiple Family	50 – 65	60 – 70	70 – 75	70 – 85
Transient Lodging - Motel, Hotels	50 – 65	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	75 – 85	NA

Table 3.13-3. Land Use Compatibility for Community Noise Environments				
Land Use Category	**Community Noise Exposure (L_{dn} or CNEL, dBA)**			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**

Notes: NA = Not Applicable; L_{dn} = average day/night sound level; CNEL = Community Noise Equivalent Level
Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Planning and Research 2003

3.13.3.3 Local

Fresno County General Plan

The Fresno County (County) General Plan Health and Safety Element provides noise policies to manage sources of noise and protect noise sensitive land uses. Implementation of the General Plan anticipates growth of population, employment, and developed land uses as shown in the Project Description. Expansion of County-wide population, employment, and developed land uses each lead to the expansion of activities that have the potential to generate adverse noise effects (Fresno County 2024).

The General Plan contains the following policies to address noise:

- *Goal HS-H:* To protect residential and other noise-sensitive uses from exposure to harmful or annoying noise levels; to identify maximum acceptable noise levels compatible with various land use designations; and to develop a policy framework necessary to achieve and maintain a healthful noise environment.
    - *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.2: Acceptable Road Noise Levels.* The County shall require new roadway improvement projects to achieve and maintain the normally acceptable noise levels shown in Chart HS-9: "Land Use Compatibility for Community Noise Environments [of the General Plan]."
    - *Policy HS-H.3: Noise-sensitive Land Uses.* The County shall allow the development of new noise-sensitive land uses (which include, but are not limited to, residential neighborhoods, schools, and hospitals) only in areas where existing or projected noise levels are "acceptable"

according to the Chart HS-9: "Land Use Compatibility for Community Noise Environments [of the General Plan]." Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to these levels.

- *Policy HS-H.4: Noise Mitigation Design and Acoustical Analysis*. So that noise mitigation may be considered in the design of new projects, the County shall require an acoustical analysis as part of the environmental review process where:
  - Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels that are "generally unacceptable" or higher according to the Chart HS-9: "Land Use Compatibility for Community Noise Environments [of the General Plan];"
  - Proposed projects are likely to produce noise levels exceeding the levels shown in the County's Noise Control Ordinance at existing or planned noise-sensitive uses.
- *Policy HS-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.7: Noise Impacts to Sensitive Uses*. Where existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects; the County shall apply the following criteria to determine the significance of the impact:
  - Where existing noise levels are less than 60 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 5 dB L_{dn} increase in noise levels will be considered significant;
  - Where existing noise levels are between 60 and 65 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 3 dB L_{dn} increase in noise levels will be considered significant; and
  - Where existing noise levels are greater than 65 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 1.5 dB L_{dn} increase in noise levels will be considered significant.
- *Policy HS-H.8: Noise Levels Compatibility*. The County shall evaluate the compatibility of Proposed Projects with existing and future noise levels through a comparison to Chart HS-9, "Land Use Compatibility for Community Noise Environments."
- *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:

- 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;
- 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 Control Ordinance

Section 8.40 of the Fresno County Code of Ordinances provides the Fresno County Noise Control Ordinance (Ordinance) which establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses. This section presents standards and requirements for noise measurements, exterior noise standards, interior noise standards, increases in allowable noise levels, reductions in allowable noise levels, and exempt noise. Table 3.13-4 describes the allowable exterior noise levels as measured at any affected single- or multiple-family residence, school, hospital, church, or public library situation in either the incorporated or unincorporated area.

Table 3.13-4. Exterior Noise Standards

Category	Cumulative Number of Minutes in Any 1-Hour Time Period	Noise Level Standards, dBA	
		Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Note: dBA = A-weighted decibels

Source: Fresno County Code of Ordinance Section 8.40

Table 3.13-4 demonstrates that a continuous source may emit up to 50 dBA during the day (7:00 a.m. to 10:00 p.m.) and 45 dBA during the night (10:00 p.m. to 7:00 a.m.) to residential land uses. 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. Each of the noise level standards specified above shall be reduced by 5 dBA for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. 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.

In Section 8.40.060, the Ordinance exempts noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 7:00 a.m. or after 5:00 p.m. on Saturday or Sunday.

Section 8.40.090 of the Ordinance states noise sources associated with the operation of electrical substation shall not exceed 50 dBA when measured at the nearest sensitive areas.

3.13.4 Impact Analysis

3.13.4.1 Methodology

Construction Modeling

Acoustic emission levels for activities associated with Project construction were based upon typical ranges of energy-equivalent noise levels at construction sites, as documented by the U.S. Environmental Protection Agency (USEPA, 1971) and the USEPA's *Construction Noise Control Technology Initiatives* (USEPA 1980). The USEPA methodology distinguishes between type of construction and construction stage. Using those energy-equivalent noise levels as input to a basic propagation model, construction noise levels were calculated at the nearest NSA.

The construction noise levels were predicted using a semi-qualitative approach based on equipment sound levels provided in the FHWA Roadway Construction Noise Model (FHWA 2018). This equipment is also used on solar projects, so the FHWA's sound levels are applicable to incorporate into the Project. Construction activities associated with the Project have the potential for localized sound on a temporary basis because construction activities progress through certain locations within the Project Area.

Vibration levels for activities associated with Project construction were based on the average of source levels in PPV published with the FTA (2006) Construction Noise Handbook, which documents several types of construction equipment measured under a wide variety of construction activities.

Operational Modeling

The Cadna-A® computer noise model was used to calculate sound pressure levels from Project operation. An industry standard, Cadna-A® was developed by DataKustik GmbH to provide an estimate of sound levels at distances from sources of known emission. It is used by acousticians and acoustic engineers due to the capability to accurately describe noise emission and propagation from complex facilities consisting of various equipment types like the Project, and in most cases, yields conservative results of operational noise levels in the surrounding community. The current International Organization for Standards (ISO) standard for outdoor sound propagation, ISO 9613 Part 2, *Attenuation of Sound during Propagation Outdoors*, was used within Cadna-A (ISO 1996).

3.13.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, noise impacts are considered significant if implementation of the Proposed Project would:

- result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- result in generation of excessive groundborne vibration or groundborne noise levels;
- for a project 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, expose people residing or working in the project area to excessive noise levels.

3.13.4.3 Impact Discussion

Threshold 1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Acoustic emission levels for activities associated with Project construction were based on typical ranges of energy equivalent noise levels at construction sites, as documented by the USEPA (1971) and the USEPA's *Construction Noise Control Technology Initiatives* (1980). The USEPA methodology distinguishes between types of construction and construction stage.

The basic model assumed spherical wave divergence from a point source located at the center of the Project Area to each receptor structure. Furthermore, the model conservatively assumed that all pieces of construction equipment associated with an activity would operate simultaneously for the duration of that activity. An additional level of conservatism was built into the construction noise model by excluding potential shielding effects due to intervening structures and buildings along the propagation path from the site to receiver locations.

The construction processes are anticipated to occur during a period of approximately 9 months and begin in 2026. Project construction would generally consist of five major stages. The first stage would include mobilization, site preparation, fencing, and laydown. The second stage would involve excavation, trenching, and trench backfill. The medium-voltage stations would sit on concrete foundations or driven piles, pending final design. The construction noise analysis conservatively assumes pile driving will be required for this activity as part of the second stage. Pile driving would be the worst-case option in terms of noise as opposed to using concrete foundations. The third stage includes installation of cables and utilities. The fourth stage includes construction and installation of the battery storage units and also includes commissioning and testing. The final stage includes road paving. Table 3.13-5 summarizes the proposed equipment to be used for each stage and Table 3.13-6 shows the composite level per phase at NSAs.

Table 3.13-5. Summary of Construction Equipment by Phase

Construction Phase	Construction Equipment	Quantity	Usage Factor (percent)	Maximum L_{eq} Equipment Noise Level at 50 feet (dBA)
Site Preparation and Grading	Tractors/Loaders/Backhoes	6	40	80
	Graders	8	40	85
	Trucks	20	40	55
	Rollers	8	20	85
	Rubber Tired Dozers	6	40	85
	Rubber Tired Loaders	8	40	80
	Skid Steer Loaders	12	40	80
	Trenchers	8	50	82
Solar Arrays and Inverters Installation	Bore/Drill Rigs	10	20	84
	Forklifts	10	40	80
	Skid Steer Loaders	2	40	80
	Trenchers	2	50	82
	Welders	6	40	73
	Trucks	5	40	55
Electrical Work	Aerial Lifts	8	20	85
	Bore/Drill Rigs	2	20	84
	Cranes	4	16	85
	Skid Steer Loaders	2	40	80
	Tractors/Loaders/Backhoes	4	40	80
	Trenchers	2	50	82
Substation Installation	Air Compressors	4	40	80
	Cranes	2	16	85
	Excavators	4	40	85
	Generator Sets	4	50	82
	Forklifts	2	40	80
	Plate Compactors	2	20	80
	Rollers	2	20	85
	Tractors/Loaders/Backhoes	6	40	80
Transmission Interconnection	Air Compressors	2	40	80
	Cranes	2	16	85
	Forklifts	4	40	80
	Generator Sets	2	50	82
	Pumps	2	50	77
	Welders	2	40	73
	Tractors/Loaders/Backhoes	2	40	80

Notes: dBA = A-weighted decibel; L_{eq} = Equivalent Noise Level

Source: Tetra Tech 2025j

In addition to the equipment described in Table 3.13-5, employees would also be commuting to and from the Project Area. The greatest potential number of employees (300) would be commuting during Phase 2, solar arrays and inverters installation. Assuming 300 individual vehicles during a single hour, the resulting sound level would be approximately 62 dBA at 50 feet.

Table 3.13-6. Summary of Construction Noise Levels by Phase						
NSA	**Distance to Construction (feet)**	**Composite L_{eq} Equipment Noise Level per Phase (dBA)**				
		Phase 1	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**
NSA-1	275	81	76	76	77	73
NSA-2	400	78	73	73	74	70
NSA-3	650	74	69	69	70	66
NSA-4	750	73	67	67	68	65
NSA-5	850	72	66	66	67	64
NSA-6	950	70	65	65	66	63
NSA-7	1,050	70	64	64	66	62
NSA-8	1,150	69	64	64	65	61

Notes: dBA = A-weighted decibel; L_{eq} = Equivalent Noise Level; NSA = Noise Sensitive Area
Source: Tetra Tech 2025j

As shown in Table 3.13-6, the highest sound level experienced during construction will be 81 dBA at NSA-1 during phase 1 construction. This is 1 dB higher than the 80 dBA FTA guidance level. In order to be in compliance with this guidance level, temporary moveable barriers will be used during construction to block the direct path from construction activities to NSA-1.

Noise levels resulting from the construction activities would vary significantly depending on several factors such as the type and age of equipment, specific equipment manufacture and model, the operations being performed, and the overall condition of the equipment and exhaust system mufflers. Project construction would occur between 7:00 a.m. and 6:00 p.m., Monday through Friday, in compliance with the County's Code. Although the County's ordinance may exempt daytime construction noise from the County's typical noise requirements, construction noise may still be considered an impact under CEQA. Furthermore, all reasonable efforts would be made to minimize the impact of noise resulting from construction activities including the implementation of Mitigation Measure NOI-1.

Operation

The Cadna-A® computer noise model was used to calculate sound pressure levels from the operation of the Project equipment in the vicinity of the Project Area. ISO 9613 Part 2 – Attenuation of Sound during Propagation Outdoors, the current ISO standard for outdoor sound propagation, was used within Cadna-A (ISO 1996). This method calculates sound attenuation under weather conditions that are favorable for sound propagation, such as for downwind propagation or atmospheric inversion, conditions which are typically considered worst-case. Offsite topography was obtained using the publicly available U.S. Geological Survey digital elevation data. A default ground attenuation factor of 0.5 was assumed for sound propagation over acoustically *mixed* ground.

The primary noise sources during operations are the inverters, substation transformer, battery storage heating, ventilation, and air conditioning (HVAC) units, and battery storage inverters. The substation

transformer will be 230 kV rated at 40 megavolt amperes. It is expected that all equipment would operate during both the daytime and nighttime periods. Reference sound power levels input to Cadna-A were provided by equipment manufacturers based on information contained in reference documents or developed using empirical methods. The source levels used in the predictive modeling are based on estimated sound power levels that are generally deemed to be conservative. The projected operational noise levels are based on Applicant-supplied sound power level data for the major sources of equipment. Table 3.13-7 summarizes the equipment sound power level data used as inputs to the acoustic modeling analysis.

Table 3.13-7. Modeled Octave Band Sound Power Level for Major Pieces of Equipment

Sound Source	Sound Power Level by Octave Band Frequency (Hz) dBA									Broadband Level (dBA)
	31.5	63	125	250	500	1k	2k	4k	8k	
Inverter	46	62	74	95	89	86	85	80	65	97
Substation Transformer	49	68	80	83	88	86	82	77	67	92
Battery Storage HVAC Unit	—	64	63	71	78	82	79	73	66	86

Notes: dBA = A-weighted decibel; HVAC = Heating, Ventilation and Air Conditioning; K = thousand

Broadband (dBA) sound pressure levels were calculated for expected normal Project operation assuming that all components identified previously are operating continuously and concurrently at the representative manufacturer-rated sound. The sound energy was then summed to determine the equivalent continuous A-weighted downwind sound pressure level at a point of reception. The received sound levels for full Project operations at the NSAs are shown in Table 3.13-8.

Table 3.13-8. Summary of Operational Noise Levels

NSA	Distance to Project (feet)	Fresno County Noise Control Ordinance Nighttime Limit (dBA)	Operational Noise Level (dBA L_{eq})	Nighttime Ambient Level (dBA L_{eq})	Increase to Nighttime Ambient Level (dBA L_{eq})
NSA-1	275	45	37	50	0
NSA-2	400	45	37	50	0
NSA-3	650	45	36	50	0
NSA-4	750	45	36	50	0
NSA-5	850	45	35	50	0
NSA-6	950	45	35	50	0
NSA-7	1,050	45	35	50	0
NSA-8	1,150	45	34	50	0

Table 3.13-8. Summary of Operational Noise Levels					
NSA	**Distance to Project (feet)**	**Fresno County Noise Control Ordinance Nighttime Limit (dBA)**	**Operational Noise Level (dBA L_{eq})**	**Nighttime Ambient Level (dBA L_{eq})**	**Increase to Nighttime Ambient Level (dBA L_{eq})**

Notes: dBA = A-weighted decibel; L_{eq} = Equivalent Noise Level; NSA = Noise Sensitive Area
Source: Tetra Tech 2025j

Sound contour plots displaying broadband (dBA) sound levels presented as color-coded isopleths are provided in Figure 3.13-2. The noise contours are graphical representations of the cumulative noise associated with full operation of the equipment and show how operational noise would be distributed over the surrounding area of the Project Area. The contour lines shown are analogous to elevation contours on a topographic map, i.e., the noise contours are continuous lines of equal noise level around some source, or sources, of noise. This operational noise level would comply with the Fresno County Noise Control Ordinance and the Noise Element and would not be higher than current ambient noise levels. Impacts would be less than significant.

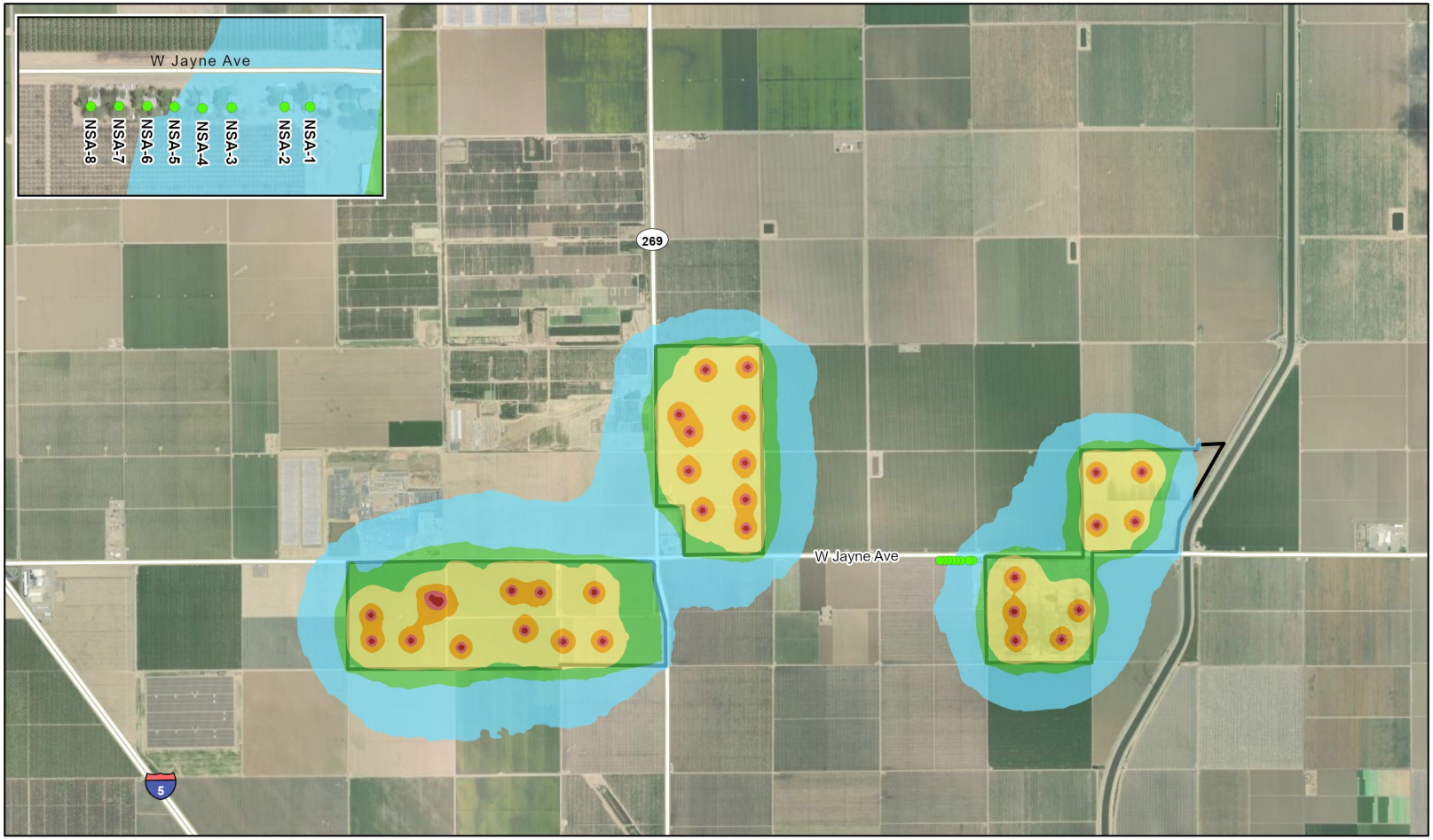
Threshold 2: Would the project result in generation of excess groundborne vibration or groundborne noise levels?

This vibration analysis evaluated the worst-case vibration source, which would be the vibratory roller. Based on vibration propagation calculations, construction vibration levels are predicted to be 0.00576 PPV in/sec, or 63 VdB, at the nearest NSA, which is approximately 275 feet from the Project Area (Tetra Tech 2025j). These levels are based on the worst-case vibration producing equipment and it is expected that other vibration generating equipment proposed for the Project construction would result in lower vibration levels. Vibration levels at the nearest NSA will be below the minimum vibration level for human perception of 65 VdB.

The only significant source of vibration resulting from the Project would occur during construction. Vibration levels have been analyzed and are not expected to be disturbing for human perception thresholds or detrimental to nearby structures throughout the duration of construction. Once construction is completed, the Project is not expected to have any significant operational vibration. Impacts would be less than significant..

Threshold 3: For a project 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 be residing or working in the project area to excessive noise levels?

The Project is not within 2 miles of a public airport or public use airport or in the vicinity of a private airstrip or an airport land use plan. No impact would occur.



N:\2024\2024-137 SLW Solar + BESS Fresno County

Map Date: 7/23/2025

Photo (or Base) Source: Tetra Tech

Figure 3.13-2 Received Sound Levels

3.13.5 Mitigation Measures

NOI-1: All reasonable efforts should be made to minimize the impact of noise resulting from construction activities, including the following measures:

- Maintain all construction tools and equipment in good operating order according to manufacturers' specifications;
- Limit construction activities to between 7:00 a.m. and 6:00 p.m., Monday through Friday;
- Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks;
- For construction devices that utilize internal combustion engines, ensure the engine's housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers' guidelines, if possible;
- Utilize a Complaint Resolution Procedure to address any noise complaints received from residents; and
- Use temporary moveable barriers to block the direct path of construction noise to NSA-1.

3.13.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.14 Population and Housing

3.14.1 Introduction

This section of the discusses the potential environmental effects of the Proposed Project related to population and housing. Impacts to population and housing are considered significant if the Proposed Project would (1) induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); (2) displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or (3) displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

3.14.2 Environmental Setting

3.14.2.1 Population

The Proposed Project is located within unincorporated Fresno County, approximately 3 miles south of the City of Huron. According to 2020 United States Census data, the County's total population is 1,008,654 (United States Census Bureau 2020). Population changes from 1960 to 2015 in unincorporated and incorporated Fresno County, as well as the closest city, Huron, are included in Table 3.14-1 below.

Table 3.14-1. Population Change in Fresno County from 1960 to 2015

City/Area	Population						
	1960	1970	1980	1990	2000	2010	2015
Huron	1,270	1,530	2,770	4,770	6,310	6,750	6,820
Incorporated	183,830	233,760	323,320	507,860	635,270	758,730	801,850
Unincorporated	182,120	179,570	191,300	159,630	164,140	171,720	170,450
Total County	**365,590**	**413,300**	**514,620**	**667,490**	**799,410**	**930,450**	**972,300**

Source: Fresno County 2023b

Table 3.14-1 shows the population of unincorporated Fresno County has decreased between 1960 and 2015 by 6.4 percent. Since 1960, the County's population has shifted from the unincorporated area to the County's cities, with the incorporated-unincorporated split shifting from 50.2 percent-49.8 percent in 1960 to 82.5 percent-17.5 percent in 2015 (Fresno County 2023b).

The Fresno Council of Governments (FCOG) completed growth projections for the County's cities and unincorporated area. FCOG projections suggest the population in the incorporated and unincorporated areas within the County are expected to follow historic trends of increasing percentage of population growth in the County's cities compared to the unincorporated areas. The unincorporated areas are projected to have only 7.9 percent of the County's population residing in it by 2050 (Fresno County 2023b). Table 3.14-2 shows project population changes in the County from 2015 to 2050.

Table 3.14-2. Projected Population in Fresno County from 2015 to 2050								
City/Area	**Population**							
	2015	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Huron	6,820	6,820	7,600	7,750	7,900	8,050	8,180	8,330
Incorporated	872,970	945,750	1,018,750	1,085,600	1,150,490	1,212,710	1,271,410	1,332,830
Unincorporated	99,330	101,710	104,080	106,250	108,350	110,370	112,280	114,270
Total County	**972,300**	**1,047,460**	**1,122,830**	**1,191,850**	**1,258,840**	**1,323,080**	**1,383,690**	**1,447,100**

Source: Fresno County 2023b

As shown by Table 3.14-2, unincorporated areas are expected to grow by 0.4 percent. Incorporated areas are projected to grow 1.2 percent, and the City of Huron is expected to grow by 0.6 percent by 2050.

3.14.2.2 Housing

The County's vacant sites inventory has an estimated capacity of 13,438 units, including 2,110 units feasible for lower-income housing, 3,373 units for moderate-income housing, and 7,955 units for above moderate-income housing. A majority of the available sites are located within the County's unincorporated communities (FCOG 2023).

Temporary housing

As of 2024 Fresno County has 73 hotels and motels, including 3 motels in southwestern Fresno County. Tent and RV campgrounds are available for temporary housing accommodation (Fresno County Office of Tourism 2024).

3.14.3 Regulatory Setting

3.14.3.1 Federal

There are no applicable federal regulations for this issue area.

3.14.3.2 State

There are no applicable state regulations for this issue area.

3.14.3.3 Local

Fresno Council of Governments

FCOG is a regional planning organization comprised of representatives from Fresno County and its 15 incorporated cities. FCOG's primary responsibilities include transportation and housing planning. FCOG is the state-designated Regional Transportation Planning Agency and federally designated Metropolitan Planning Organization for Fresno County. FCOG is responsible for preparing the Regional Housing Needs

Allocation (RHNA) Plan, a state-mandated document that determines the number of housing units each city and county are responsible for accommodating in the housing element sections of their general plans. The planning period for the 2023 RHNA Plan extends for 8 years from June 2023 to December 2031 the plan, which relies on Census data from 2020, State Department of Finance Data, California Department of Housing and Community Development data, and FCOG calculations, determined how best to allocate regional housing needs to Fresno County jurisdictions (FCOG 2022b).

Fresno County General Plan

In 2023, Fresno County and 14 of the 15 cities in the County, with the help of the FCOG, collectively prepared a Multi-Jurisdictional Housing Element (MJHE) for the fifth-cycle of housing element updates (FCOG 2023). The primary objective of the project was to prepare a regional plan addressing housing needs through a single certified housing element for all 14 participating local governments. The MJHE covers the planning period of December 31, 2023, through December 31, 2031, for all jurisdictions, and includes the following content:

- An identification and analysis of existing and projected local housing needs
- An identification of resources and constraints
- Goals, policies, and implementation programs for the rehabilitation, maintenance, improvement, and development of housing for all economic segments of the population

MJHE goals and policies that are relevant to the Proposed Project are described below:

- *Goal 1:* Facilitate and encourage the provision of a range of housing types to meet the diverse needs of residents.
    - *Policy 1.9:* Encourage development around employment centers that provides the opportunity for local residents to live and work in the same community by balancing job opportunities with housing types.
- *Goal 3:* Improve and maintain the quality of housing and residential neighborhoods.
    - *Policy 3.1:* Preserve the character, scale, and quality of established residential neighborhoods by protecting them from the encroachment of incompatible or potentially disruptive land uses and/or activities.

Fresno County Solar Facility Guidelines

In December 2017, the Fresno County Board of Supervisors approved the new County of Fresno Solar Facility Guidelines. The new guidelines state that, "If the project is approved, the applicant shall make all reasonable efforts to conduct local recruitment efforts and/or coordinate with employment agencies in an attempt to hire from the local workforce" and" if the project is approved, the applicant shall make all reasonable efforts to purchase products and equipment from local (Fresno County) manufacturing facilities and/or vendors" (Fresno County 2017).

3.14.4 Impacts Analysis

3.14.4.1 Methodology

3.14.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, population and housing impacts are considered significant if implementation of the Proposed Project would:

- induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere;
- displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

3.14.4.3 Impact Discussion

Threshold 1: Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure?

The Project will not induce substantial permanent population growth in the area, either directly or indirectly. The Project does not include the building of any new homes or businesses, so it would not directly induce population growth. The Project would not induce population growth indirectly from the construction of an access road, internal roads, or from other Project infrastructure because the Project would not be accessible by the public.

The peak onsite construction workforce is expected to include 200 individuals who will be onsite at any given time. It is anticipated that most workers would commute to the site from nearby communities such as Huron, Coalinga, Lemoore, Visalia and other locales within commuting distance to the Project Area. The construction of the Proposed Project is expected to last approximately 9 months. The anticipated operational lifespan of the Project is about 35 years, after which point it would be decommissioned. Decommissioning and site restoration are expected to require the same or smaller workforce.

In accordance with the Fresno County Solar Guidelines and as described in Section 2.6.2 *Construction Timing, Activities and Equipment,* most of the construction workforce would be hired from the existing workforce in the Fresno area. Once construction is completed, the number of staff onsite may range from none (it is not necessary for staff to be present during plant operations) to 30 during periodic, routine maintenance events. Non-routine (emergency) maintenance could require additional workers.

Workers would be expected to commute to the Project Area from local and regional towns and cities, rather than relocate. As such, construction, operation, and decommissioning of the Project would not require the construction of any new homes or other infrastructure.

As a result, the Project is not expected to induce direct or indirect permanent population growth. Additionally, even though the Project would increase the availability of electrical energy capacity, this factor alone is not expected to induce substantial population growth. Many factors such as economic conditions, land availability, the availability of water supply and sewer services, and local planning efforts are more likely to impact population growth. As such, the energy produced by the Project would not directly or indirectly encourage new development or induce population growth. Impacts would be less than significant.

Threshold 2: Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

For the reasons discussed in the analysis of Threshold 1, construction, operation, and decommissioning of the Project would not result in the displacement of existing homes, necessitating the need to construct replacement housing elsewhere. As such, no impact would occur with regard to the displacement of existing housing.

3.14.5 Mitigation Measures

No mitigation measures are required.

3.14.6 Level of Significance After Mitigation

Impacts are less than significant.

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3.15 Public Services

3.15.1 Introduction

This section describes the affected environment and regulatory setting pertaining to public services, which include fire and police protection, schools, and other governmental offices/facilities. This section also addresses the potential impacts on public services that would result from implementation of the Proposed Project and the mitigation measures to reduce these potential impacts. Information for this section was taken from numerous sources, including websites and service agency plans. Impacts to public services are deemed significant if the Proposed Project would (1) induce substantial population growth in an area, either directly (by proposing new homes and businesses) or indirectly (through extension of roads or other infrastructure); (2) displace substantial numbers of existing housing, creating the need for construction of new housing elsewhere; or (3) displace substantial numbers of people, necessitating the construction of new housing elsewhere.

3.15.2 Environmental Setting

3.15.2.1 Fire Protection

The Fresno County Fire Protection District (FCFPD) would provide fire protection services to the Project Area. Covering approximately 2,655 square miles, the FCFPD serves more than 220,000 residents in the communities of Tarpey Village, Calwa, Easton, Malaga, Del Rey, Caruthers, San Joaquin, Tranquillity, Prather, Friant, Wonder Valley, Cantua Creek, Three Rocks, Five Points, Tivy Valley, San Creek, and the Cities of San Joaquin, Parlier, Mendota, Fowler, and Huron (FCFPD 2024). The FCFPD works in coordination with California Department of Forestry and Fire Protection (CAL FIRE) to provide emergency services from 17 District Fire Stations (FCFPD 2022).

The nearest FCFPD fire station is Fresno County Fire Station 93 located at 36421 South Lassen in the town of Huron, approximately 3.6 miles northeast of the Project Area.

3.15.2.2 Law Enforcement

The Fresno County Sheriff's Office (FSO) would provide law enforcement services to the Project Area. FSO is divided into four patrol areas; the Project Area falls under Patrol Area 1, which covers the western portion of the County. The nearest FSO substation that would serve the Project Area is the Patrol Area One Substation located at 21925 West Manning Avenue in San Joaquin, located approximately 31 miles northwest of the Project Area. Area 1 covers more than 2,400 square miles of western Fresno County and includes the incorporated cities of San Joaquin, Coalinga, Huron, Kerman, Mendota, and Firebaugh, as well as a number of unincorporated communities, including Tranquillity, Biola, Five Points, Helm, Three Rocks, Cantua Creek, and Dos Palos.

3.15.2.3 Schools

The Project Area falls within the Coalinga-Huron Unified School District (CHUSD), which serves approximately 5,000 students (CHUSD 2024). The nearest school to the Project Area within the Coalinga-Huron Unified School District is the Huron Elementary School, located 36131 N Street in the town of Huron, approximately 3.6 miles north.

3.15.2.4 Parks

The County offers a variety of recreational opportunities including regional parks, city parks, state and national parks, national forests, wilderness areas, scientific research areas, and other recreational opportunities. The Project Area is not located in or adjacent to a residential area, or within the immediate vicinity of any recreational areas or parks. Parks and other recreational resources are discussed further in Section 3.16.

3.15.3 Regulatory Setting

3.15.3.1 Federal

There are no applicable federal regulations for this issue area.

3.15.3.2 State

California Fire Code

The 2019 California Fire Code (Title 24, Part 9 of the California Code of Regulations [CCR]) establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operation. Chapter 6 of the Code (Building Services and Systems) focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. The building services and systems that are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 of the Code (Fire Safety During Construction and Demolition) outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies. Features regulated under Chapter 33 include fire protection systems, fire fighter access to the Project Area and building, means of egress, hazardous materials storage and use, temporary heating equipment, and other potential ignition sources.

California Department of Forestry and Fire Protection (CAL FIRE)

Under Title 14 of the CCR, CAL FIRE has the primary responsibility for implementing wildfire planning and protection for State Responsibility Areas (SRAs). CAL FIRE develops regulations and issues fire-safe

clearances for land within a fire district of the SRA. More than 31 million acres of California's privately-owned wildlands are under CAL FIRE's jurisdiction.

CAL FIRE classifies Fire Hazard Severity Zones (FHSZs) based on factors including fuel, slope, and fire weather to identify the degree of fire hazard throughout California (i.e., moderate, high, or very high). While FHSZs do not predict where or when a wildfire will occur, they do identify areas where wildfire hazards could be more severe. CAL FIRE adopted FHSZ maps for SRAs and Local Responsibility Areas (LRAs) in 2007. Fire Hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front. The Project Area is not located within an SRA, but it is located within an unincorporated LRA (CAL FIRE 2023a).

Beyond its wildland firefighting role, CAL FIRE is an *all-risk* department. It may very well be a CAL FIRE engine and crew that is dispatched to the scene of an auto accident, or to an emergency in a home. The CAL FIRE is always ready to respond to medical aids; hazardous material spills; swift water rescues; search and rescue missions; civil disturbances; train wrecks; floods, earthquakes and more. Through contracts with local government, CAL FIRE provides emergency services in 36 of California's 58 counties (CAL FIRE 2024).

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California legislature in 1965 to preserve open space and parkland in the rapidly urbanizing areas of the state. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance.

State School Funding

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees. California Government Code Section 65995 limits the fee to be collected to the statutory fee unless a school district conducts a School Facility Needs Assessment (California Government Code Section 65995.6) and meets certain conditions. Senate Bill 50 (Chapter 407, Statutes of 1998) instituted a school facility program by which school districts can apply for state construction and modernization funds. This legislation-imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development.

3.15.3.3 Local

Fresno County General Plan

The goals and policies from the Fresno County 2024 General Plan pertain to Public Services that are applicable to the Proposed Project.

- *Goal PF-G:* To protect life and property by deterring crime and ensuring the prompt and efficient provision of law enforcement service and facility needs to meet the growing demand for police services associated with an increasing population.
    - *Policy PF-G.2:* The County shall strive to maintain a staffing ratio of two (2) sworn officers serving unincorporated residents per 1,000 residents served. (This count of officers includes all ranks of deputy sheriff personnel and excludes all support positions, and all sworn officers serving county wide population interests such as bailiffs, and sworn officers serving contract cities and grant specific populations)
    - *Policy PF-G.6:* The County shall promote the incorporation of safe design features (e.g., lighting, adequate view from streets into parks) into new development by providing Sheriff Department review of development proposals.
- *Goal PF-H:* To ensure the prompt and efficient provision of fire and emergency medical facility and service needs, to protect residents of and visitors to Fresno County from injury and loss of life, and to protect property from fire.
    - *Policy PF-H.1:* The County shall work cooperatively with local fire protection districts to ensure the provision of effective fire and emergency medical services to unincorporated areas within the county.
        - Implementation Program PF-H.A: The County shall work with the California Department of Forestry and Fire Protection, local fire protection agencies, and city fire departments to maximize the use of resources to develop functional and/or operational consolidations and standardization of services and to maximize the efficient use of fire protection resources.
    - *Policy PF-H.2:* Prior to approval of development projects, the County shall determine the need for fire protection services. New development in unincorporated areas of the County shall not be approved 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:* The County shall require that new development be designed to maximize safety and minimize fire hazard risks to life and property.
    - *Policy PF-H.8:* The County shall encourage local fire protection agencies in the county to maintain the following as minimum standard for average first alarm response times to emergency calls:

  - 5 minutes in urban areas;
  - 15 minutes in suburban areas; and
  - 20 minutes in rural areas.

- *Policy PF-H.10:* The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the California Fire Code and other State and local ordinances.
- *Policy PH-H.11:* The County shall encourage local fire protection agencies to provide and maintain advanced levels of emergency medical services to the public, consistent with current practice.

- *Goal PF-I:* To provide for the educational needs of Fresno County and provide libraries for the educational, recreational, and literary needs of Fresno County residents.
  - *Policy PF-I.1:* The County shall encourage school districts to provide quality educational facilities to accommodate projected student growth in locations consistent with land use, infrastructure, and service policies of the General Plan.
  - *Policy PF-I.4:* The County shall work cooperatively with school districts in monitoring housing, population, and school enrollment trends and in planning for future school facilities, infrastructure, and service needs, and shall assist school districts in locating appropriate sites for new schools.
  - *Policy OS-H.2:* The County shall strive to maintain a standard of five (5) to eight (8) acres of County-owned improved parkland per one thousand (1,000) residents in the unincorporated areas.

3.15.4 Impact Analysis

3.15.4.1 Thresholds of Significance

The Fresno County CEQA Implementation Document and Fresno County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant adverse effect on public services.

A project could have a significant adverse effect on public services if it would:

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

- Law Enforcement Protection
- Schools
- Parks
- Other Public Facilities

3.15.4.2 Impact Discussion

Threshold 1: Would the project result in 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 fire protection services or police protection services?

Fire Protection

Construction

The peak number of construction workers onsite would be approximately 200 individuals at any given time. The presence of construction workers in the Project Area would be temporary, anticipated to last approximately 9 months. The Proposed Project would include the development of a 125 Megawatt (MW) solar photovoltaic electric generation facility coupled with an estimated 30 MW Battery Energy Storage System (BESS), on seven parcels totaling approximately 1,400 acres of privately owned land in unincorporated portions of Fresno County, California. As determined by the County, the Project Area is not within an area of high or very high fire hazard (CAL FIRE 2023).

Fire protection requirements are based on the number of residents and workers in the FCFPD primary service areas. Service demand is primarily tied to population, not building size, because emergency medical calls typically make up the majority of responses provided by the fire department. As the number of residents and workers increases, so does the number of emergency medical calls. The Project does not propose residential uses. Therefore, the Project would not increase service demands as a result of an increase in residential uses.

Service demands could increase during Project construction due to construction personnel onsite. Typically, service demands per employee are less than service demands per resident. Nevertheless, the addition of construction personnel in the Project Area could result in an increase in demand for fire protection services. While this would be an increase above existing levels, the presence of construction workers onsite would be temporary, as the construction period for the Proposed Project is anticipated to last approximately 9 months.

While construction of the Proposed Project would increase the number of people in the Project Area, and the increase would be temporary, fire hazards from the Proposed Project as a large-scale construction project could increase the need for response from fire for emergency services as well as fire protection. Given the temporary nature of the Proposed Project's construction phase, impacts would be less than significant.

Operation

Once constructed, the Project Area would be monitored in real time remotely by the Project proponent's remote-operations control center. The remote operators would be continually aware of plant output, voltage, and local weather conditions and would receive real-time alerts in the event of abnormal operating conditions, allowing the operators to dispatch technicians as needed. Only Project staff and/or its contractors would be allowed access to the Project Area. Although unlikely, maintenance activities could introduce fire risks to the Project Area. All Project facilities would be designed and constructed in accordance with the 2022 California Fire Code and Fresno County Fire Code such that fire hazards are reduced and/or avoided. Compliance with these standards includes the preparation and implementation of a Project-specific Fire Safety Plan, which will contain notification procedures and emergency fire precautions for use during construction, operation, and decommissioning.

The Proposed Project includes one energy storage facility that would have a fire rating in conformance with County and California Building Code standards. The energy storage facility would include specialized fire suppression systems installed for the battery rooms to minimize fire risk. Therefore, impacts to fire protection services and facilities would be less than significant.

Law Enforcement Protection

Construction

Similar to fire protection services, the need for police protection services could temporarily increase during construction of the Proposed Project.

The Project Area is located in a relatively remote location surrounded by undeveloped land and vacant agricultural uses. Land uses in the region consist largely of agriculture and grazing land unlikely to attract attention that would make Project facilities susceptible to crime, especially since the Project Area is not visible from public roadways. Therefore, a large increase for FSO services is not expected.

Additionally, security fencing would be installed around the site perimeter of each of the portions of the Proposed Project. Fencing would be either a 6-foot-tall chain link fence or an 8-foot ranch style fence with no barbed wire. All fencing shall comply with all applicable requirements of the Fresno County Division of Public Works and Planning. The fencing would remain for the life of the Proposed Project. Security lighting would also be installed to allow for ongoing maintenance and security purposes. Lighting would be installed at each entry and egress gate, as well as manually controlled lights at the equipment pads and substation. While Project construction would increase the number of people on the Project Area, the increase would be temporary and negligible and thus would not substantially increase the service demand for law enforcement protection services in Fresno County. Therefore, new or physically altered law enforcement facilities would not be required to accommodate the limited increase in needs from the Proposed Project during construction. As such, impacts to law enforcement services would be less than significant.

Operation

As described above, the Project Area is located in a rural area and is thus unlikely to attract attention that would make Project facilities susceptible to crime. The chain-link security fencing around the site perimeter and controlled access gates would minimize the need for sheriff surveillance and response during Project operation. Therefore, new or physically altered law enforcement facilities would not be required to accommodate the Proposed Project. The Proposed Project would not result in 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 law enforcement services. Impacts would be less than significant.

Schools/Parks/Other Public Facilities

Construction

As stated above, the peak number of construction workers to be onsite would be approximately 200 individuals, onsite at any given time. The presence of construction workers in the Project Area would be temporary, due to the approximate 9-month construction period. These construction workers would likely come from an existing local or regional construction labor force and would not likely relocate their households as a consequence of working on the Proposed Project. Therefore, the short-term increased employment of construction workers in the Project Area would not result in a notable increase in the residential population of the area surrounding the Project Area. Accordingly, there would not be a corresponding demand for or use of the local schools, parks, or public facilities. Therefore, Project construction workers would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would Project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment. Additionally, the Project would not result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts to local schools, parks, or public facilities during Project construction would be less than significant.

Operation

Operation of the Proposed Project would not require full-time workers onsite. Employees would intermittently visit the Project Area for routine inspection, maintenance, and repair of solar arrays and accessory components. These employees would likely come from an existing local and/or regional labor force and would not likely relocate their households as a consequence of working on the Proposed Project. Even if the maintenance employees were hired from out of the area and had to relocate to southern Fresno County, the resulting addition of potential families to this area would not result in a substantial increase in the number of users at local schools, parks, or public facilities. Therefore, impacts from staffing levels during Project operation would not result in an increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would Project operation require the construction or expansion of recreational facilities which might have an adverse effect on the environment. The Project would not result in substantial adverse physical impacts

associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Therefore, impacts during Project operation would be less than significant.

3.15.5 Mitigation Measures

No mitigation is required.

3.15.6 Level of Significance after Mitigation

Impacts would be less than significant.

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3.16 Recreation

3.16.1 Introduction

This section discusses impacts associated with recreational resources. Impacts to recreational resources are considered significant if the Proposed Project would (1) 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 (2) include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.16.2 Environmental Setting

Recreational opportunities within Fresno County (County) include city parks, regional parks, state and national parks, national forests, and wilderness areas. Regional recreational facilities include 12 parks, 2 fishing access areas and a boat-launch/parking facility at Shaver Lake (Fresno County 2023b). The closest recreational facility is Huron Fishing Access, located approximately 7 miles north of the Project Area. The closest County Park is Los Gatos Creek Park, located 25 miles northwest of the Project Area.

3.16.3 Regulatory Setting

3.16.3.1 Federal

There are no applicable federal regulations for this issue area.

3.16.3.2 State

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California legislature in 1965 to preserve open space and parkland in the rapidly urbanizing areas of the state. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance. The County has traditionally chosen not to enforce the Quimby Act; however, it reserves the right to enforce it in the future.

3.16.3.3 Local

Fresno County General Plan

The Fresno County General Plan's Open Space and Conservation Element seeks to enhance recreational opportunities by encouraging further development of public and private recreational opportunities in unincorporated Fresno County, and establishes goals, policies, and programs related to open space and recreation. The following goal and polices are related to recreation are applicable to the Project:

- *Goal OS-H:* To designate land for and promote the development and expansion of public and private recreational facilities to serve the needs of residents and visitors.
    - *Policy OS-H.2:* The County shall strive to maintain a standard of five (5) to eight (8) acres of County-owned improved parkland per one thousand (1,000) residents in the unincorporated areas.

3.16.4 Impacts Analysis

3.16.4.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, recreation impacts are considered significant if implementation of the Proposed Project would result in:

- an increase in 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
- additional recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.16.4.2 Impact Discussion

Threshold 1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Proposed Project is not located within or adjacent to a residential area, or within the immediate vicinity of any parks or recreational facilities. Additionally, there are no parks or existing recreational facilities located on the Project Area. Therefore, the Project would not result in an increase in the usage of existing neighborhood or regional park or recreational facilities.

It is assumed the construction workers would be hired from within Fresno County, in accordance with the County's Guidelines for Solar Facility development. Construction would not result in an increase in population as a result of workers coming temporarily. Therefore, the Project would not result in or accelerate the substantial physical deterioration of existing recreational facilities. No impact would occur.

Threshold 2: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Under the County's General Plan Policy OS-H.2, the parkland standard for the unincorporated areas is 5 to 8 acres of County-owned improved parkland per 1,000 residents. According to the County's General Plan Background Report, unincorporated Fresno County has a population of 170,990 people (as of 2018) and contains 1,578 acres of County parks. The County, therefore, exceeds the parkland standard of 5 acres per 1,000 residents (Fresno County 2023b).

The Proposed Project does not include recreational facilities. The Project would not result in an increase in population within the County, as discussed in Section 3.14; therefore, no new or expanded recreational facilities would be needed to meet the needs of the Proposed Project. The County meets Policy OS-H.2, and the Project would not increase the population within the County or result in the need for additional recreational facilities. As such, no impact would occur.

3.16.5 Mitigation Measures

No mitigation measures are required.

3.16.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.17 Transportation

3.17.1 Introduction

This section describes the affected environment, regulatory setting, and Project impacts for transportation and traffic. Impacts to transportation are considered significant if the Proposed Project would (1) conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; (2) conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b); (3) substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or (4) result in inadequate emergency access.

The analysis is based on the following technical document included as an appendix to the Draft EIR:

- San Luis West Solar Project Traffic Impact Study (Tetra Tech 2024c; Appendix N).

3.17.2 Environmental Setting

The Project Area is in an unincorporated, rural area of southern Fresno County (County), approximately 10 miles northwest of Kettleman City and approximately 1.5 miles east of Interstate (I) 5. The surrounding land uses consist primarily of agricultural uses. Access from public roads to the Project Area would be via main entrances along West Jayne Avenue and State Route (SR) 269. A network of agricultural roads within the Project Area would be utilized for ingress and egress throughout Project construction. No public road improvements are proposed as a part of the Project, unless required by the County. The Project Area is primarily agricultural land, zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) or AE-40 (Exclusive Agriculture, 40-acre minimum parcel size) in the unincorporated areas of Fresno County. The parcels in the general vicinity of the Project Area are similarly zoned. Within this zoning district, Fresno County permits utility-scale solar energy uses with an Unclassified Conditional Use Permit. Existing agricultural roads within the Project Area would be used for access during construction. No road improvements have been proposed as a part of the Project at the time of this report. The Project Area includes three subareas, shown in Figure 2 as Subareas A, B, and C. These Subareas are defined below:

- Subarea A would include approximately 280 acres of solar arrays and associated infrastructure (i.e., internal roads, medium voltage collection lines, substation, Battery Energy Storage System [BESS] and Project Operations and Maintenance [O&M] building) located on four parcels totaling approximately 800 acres, of which approximately 650 acres are currently leased by the Project and approximately 150 acres are owned by the Project. Subarea A is located southeast of the existing Pacific Gas and Electric Company Gates Substation, immediately south of West Jayne Avenue and approximately 0.5 mile due west of SR-269. The Substation will also be located within Subarea A and it is anticipated that the BESS will be collocated with the Substation in Subarea A. Two temporary laydown areas totaling approximately 10 acres would be located in Subarea A, along West Jayne Avenue.

- Subarea B would include approximately 250 acres of solar arrays and associated infrastructure (i.e., internal roads and medium voltage collection lines) on one parcel, consisting of approximately 300 acres of fully leased land. Subarea B is bordered by SR-269 to the west, West Jayne Avenue to the south, and active row crops to the east.
- Subarea C would include approximately 240 acres of solar arrays and associated infrastructure (i.e., internal roads and medium voltage collection lines) on approximately 325 acres of land leased by the Project. Subarea C consists of two parcels located just west of the California Aqueduct. West Jayne Avenue bisects Subarea C.

3.17.2.1 Roadways

Major Highways

I-5 is the only major transportation route near the Project Area. This Interstate would provide regional access to the general vicinity of the Proposed Project during the construction and operation phases. I-5 is a major, four-lane divided freeway that extends north from the Mexican border to the Canadian border and provides access for goods movement, shipping, and travel. This highway crosses the western portion of Fresno County and is designated as major highway by the Fresno County General Plan Transportation and Circulation Element due to its significance for regional and interstate travel, as well as for the movement of goods and people. It is anticipated that primary access to the Project Area will originate via I-5 to exit 325, West Jayne Avenue; a paved Fresno County Road featuring one lane of traffic in each direction (east and west). From there, traffic will travel eastbound along West Jayne Avenue to the Proposed Project Area.

Another highway within the vicinity of the Project that may provide access includes SR-269 (Lassen Avenue), an undivided conventional state highway near the center of the Project Area, that runs north to south, connecting the City of Avenal to north to the community of Huron, and West Jayne Avenue, which spans the central valley east-west. SR-269 has two 12-foot-wide travel lanes and paved shoulders.

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there is one Designated State Scenic Highway within Fresno County, SR-180, located approximately 55 miles northwest of the Project Area.

Local Roads

Most roadways in the immediate Project Area vicinity consist of unnamed, unpaved agricultural roads. There is one local county road, West Jayne Avenue, in the vicinity of the Project Area. West Jayne Avenue is a paved two-lane road that crosses from east to west and bisects the Project Area.

There are three private roads in the vicinity of the Project Area. These are West Phelps Avenue, South Madera Avenue, and West Tractor Avenue. West Phelps and West Tractor avenues are east-west alignments, and South Madera Avenue is a north-south alignment. These are rural unpaved roads providing access to the surrounding agricultural fields.

Study Area

The study area chosen for the transportation analysis in the Traffic Impact Analysis includes key roadways and intersections in the Project Area vicinity that would be most affected by construction of the Project (Tetra Tech 2024c). The study area roadway segments include:

- West Jayne Avenue west SR-269 (Lassen Avenue)
- West Jayne Avenue east SR-269 (Lassen Avenue)
- SR-269 south of West Jayne Avenue
- SR-269 north of West Jayne Avenue

The study area intersections include:

- West Jayne Avenue at I-5 southbound ramps
- West Jayne Avenue/South Butte Avenue at I-5 northbound ramps
- West Jayne Avenue at SR-269 (Lassen Avenue)
- SR-269 (Lassen Avenue) at I-5 northbound ramps
- SR-269 (Lassen Avenue) at I-5 southbound ramps
- West Jayne Avenue At Existing Farm Road/Site Access 1
- West Jayne Avenue at Proposed Site Access 2
- West Jayne Avenue at existing Farm Road/Site Access 3
- West Jayne Avenue at Proposed Site Access 4
- West Jayne Avenue at existing Farm Road/Site Access 5
- West Jayne Avenue at Proposed Site Access 6
- West Jayne Avenue at Proposed Site Access 7
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 8 (Firestone Avenue)
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 9
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 10
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 11 (West Phelps Avenue)
- West Jayne Avenue at Existing Farm Road/Site Access 12
- West Jayne Avenue at Proposed Site Access 13
- West Jayne Avenue at Proposed Site Access 14

- West Jayne Avenue at Existing Farm Road/Site Access 15 (South Madera Avenue)

3.17.2.2 Airports

There are no airports in the vicinity of the Project Area. The nearest airport to the Project Area is the New Coalinga Municipal Airport, located approximately 9 miles to the west. The nearest major airport is the Fresno Yosemite International Airport, which is over 40 miles northeast from the Project Area. The nearest military facility is Naval Air Station Lemoore, approximately 11 miles to the northeast.

3.17.2.3 Public Transportation

Public transportation in the Project Area is provided by the Fresno County Rural Transit Agency (FCRTA), which offers fixed transit routes and a Dial-a-Ride public transportation service for residents in 18 cities, towns, and unincorporated communities. Additionally, the FCRTA offers the Coalinga Transit route which operates a once daily inbound trip from Coalinga to Fresno in the morning and a once daily outbound trip from Fresno to Coalinga in the evening. Coalinga Transit travels on SR-269 through the area via West Jayne Avenue and SR-269. No transit stops are located within the Project Area (Tetra Tech 2024c).

3.17.2.4 Non-Motorized Transportation

There are currently no dedicated pedestrian or bicycle facilities in the immediate vicinity of the Project Area or along the surrounding roadways or highways. SR-269 (Lassen Avenue) in the Project Area is shown as an *existing or planned bikeway* in the Fresno County General Plan (Transportation and Circulation Element). Bicycles are allowed on SR-269, and the shoulder is 2 to 8 feet along the rural two-lane highway.

3.17.2.5 Existing Traffic Volume

Existing traffic volumes were developed based on recent intersection turning movement counts collected at study area intersections (Tetra Tech 2024c). Existing average daily traffic volumes for key roadways in the immediate vicinity of the Project Area are provided in Table 3.17-1.

Table 3.17-1. Existing Daily Traffic Volumes

No.	Segment	Average Daily Traffic			Heavy Vehicle Percentage		
		NB/EB	SB/WB	Combined	NB/EB	SB/WB	Combined
1	West Jayne Avenue east of I-5	1,889	1,760	3,649	15%	18%	16%
2	SR-269 south of West Jayne Avenue	1,507	1,456	2,963	19%	21%	20%

Notes: EB = eastbound; I = Interstate; NB = northbound; SB = southbound; SR = State Route; WB = westbound
Existing daily traffic volumes based on automatic traffic recorder counts collected on Wednesday, September 4, 2024.

Source: Tetra Tech 2024c

3.17.2.6 Existing Roadway Segment Operations

A peak hour roadway segment Level of Service (LOS) analysis was prepared for existing conditions in the study area. Table 3.17-2 provides existing weekday peak hour roadway segment LOS.

Table 3.17-2. 2024 Existing Weekday Peak Hour Roadway Segment LOS

No.	Roadway Segment	AM Peak Hour				PM Peak Hour			
		Direction 1 (NB/EB)		Direction 2 (SB/WB)		Direction 1 (NB/EB)		Direction 2 (SB/WB)	
		Vehicle Density	LOS	Vehicle Density	LOS	Vehicle Density	LOS	Vehicle Density	LOS
1	West Jayne Avenue (west of SR-269)	0.2	A	1.8	A	1.3	A	0.3	A
2	West Jayne Avenue (east of SR-269)	0.2	A	1.2	A	0.6	A	0.2	A
3	SR-269 (north of West Jayne Avenue)	0.5	A	1.2	A	1.4	A	0.9	A
4	SR-269 (south of West Jayne Avenue)	0.3	A	0.6	A	0.5	A	0.5	A

Notes: EB = eastbound; LOS = Level of Service; NB = northbound; SB = southbound; SR = State Route; WB = westbound

Source: Transportation Research Board, Highway Capacity Manual 7th Edition Methodology

As shown in Table 3.17-2, all study area roadway segments are currently operating well below capacity at LOS A operations.

3.17.2.7 Existing Intersection Operations

An intersection LOS analysis was prepared for existing conditions of all study area intersections. Table 3.17-3 provides the results of the existing intersection LOS analysis.

Table 3.17-3. 2024 Existing Weekday Peak Hour Intersection LOS

No.	Intersection & Movement		AM Peak Hour				PM Peak Hour			
			V/C	Delay*	LOS	95th Q† (feet)	V/C	Delay*	LOS	95th Q† (feet)
1	I-5 SB Ramps at West Jayne Ave	WB Left	0.01	7.5	A	0.0	0.01	8.0	A	0.0
		WB Through	0.00	0.0	A	0.0	0.00	0.0	A	0.0
		SB	0.12	14.0	B	10.0	0.08	12.0	B	5.0

Table 3.17-3. 2024 Existing Weekday Peak Hour Intersection LOS

No.	Intersection & Movement		AM Peak Hour				PM Peak Hour			
			V/C	Delay*	LOS	95th Q† (feet)	V/C	Delay*	LOS	95th Q† (feet)
2	I-5 NB Ramps at West Jayne Ave	NB	0.25	17.3	C	25.0	0.16	16.4	C	15.0
		EB	0.03	8.4	A	2.5	0.05	7.8	A	5.0
		WB	0.00	8.5	A	0.0	0.01	8.4	A	0.0
		SB	0.11	11.0	B	7.5	0.12	11.6	B	10.0
3	SR-269 at West Jayne Ave	NB	0.15	9.4	A	12.5	0.20	9.2	A	17.5
		EB	0.14	9.9	A	12.5	0.34	10.8	B	37.5
		WB	0.33	10.3	B	35.0	0.10	8.5	A	7.5
		SB	0.34	11.0	B	37.5	0.27	10.0	A	27.5
4	I-5 NB Ramps at SR-269	NB Left	0.05	8.0	A	5.0	0.07	8.0	A	5.0
		NB Through	0.00	0.0	A	0.0	0.00	0.0	A	0.0
		WB	0.10	11.3	B	7.5	0.18	13.2	B	15.0
5	I-5 SB Ramps at SR-269	EB	0.07	10.0	B	5.0	0.09	10.4	B	7.5
		SB Left	0.01	8.0	A	0.0	0.02	8.4	A	2.5
		SB Through	0.00	0.0	A	0.0	0.00	0.0	A	0.0
6	West Jayne Ave at Unnamed Farm Road/Site Access 1	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
8	West Jayne Ave at Subarea C Site Trinity Ave/Site Access 3	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB Left	0.00	7.9	A	0.00	0.00	0.00	A	0.00
		EB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	10.0	B	0.00	0.00	8.9	A	0.00
10	West Jayne Ave at Unnamed Farm Road/Site Access 5	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
13	Lassen Ave (SR-269) at Firestone Ave/Site Access 8	NB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		NB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00

Table 3.17-3. 2024 Existing Weekday Peak Hour Intersection LOS

No.	Intersection & Movement		AM Peak Hour				PM Peak Hour			
			V/C	Delay*	LOS	95th Q† (feet)	V/C	Delay*	LOS	95th Q† (feet)
14	Lassen Ave (SR-269) at Unnamed Farm Road/Site Access 9	NB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
15	Lassen Ave (SR-269) at Unnamed Farm Road/Site Access 10	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
16	Lassen Ave (SR-269) at W. Phelps Ave/Site Access 11	NB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
17	West Jayne Ave at Unnamed Farm Road/Site Access 12	EB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
20	West Jayne Ave at S. Madera Ave/Site Access 15	EB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	0.00	A	0.00	0.00	0.00	A	0.00

Notes: EB = eastbound; LOS = Level of Service; NB = northbound; I = Interstate; SB = southbound; SR = State Route; WB = westbound; V/C = Volume to Capacity Ratio
* = Delay in seconds per vehicle
† = Vehicles queues measured in feet

Source: Tetra Tech 2024c, Table 4

As shown in Table 3.17-3, all study area intersections are currently operating below capacity at LOS C or better during the weekday morning and evening commuter peak hours.

3.17.3 Regulatory Setting

3.17.3.1 Federal

No federal regulations pertaining to transportation apply to the Proposed Project.

3.17.3.2 State

California Department of Transportation

Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Fresno County is under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to potential transportation and traffic impacts of the Project:

- California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

3.17.3.3 Local

Fresno County General Plan

The Transportation and Circulation Element of the County General Plan provides the framework for Fresno County decisions concerning the Countywide transportation system, which includes various transportation modes and related facilities. It also provides for coordination with the cities and unincorporated communities within the County, with the Regional Transportation Plan adopted by the Council of Fresno County Governments, and with state and federal agencies that fund and manage transportation facilities within the County. This element of the General Plan sets out goals, policies, and programs related to transportation and circulation. The following transportation-related policies are applicable to the Project:

- *Policy TR-A.4: 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.6: The County shall require dedication of right-of-way or dedication and construction of planned road facilities as a condition of land development and require an analysis of impacts of traffic from all land development projects including impacts from truck traffic. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefit to others through traffic impact fees.*

- *Policy TR-A.10: 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 and Regional Trails Master Plan

The Fresno County Department of Public Works and Planning adopted the Regional Bicycle Recreational Trails Master Plan to establish a framework for future development of the County's bicycle and recreational trail network and makes the County eligible for local, state, and federal funding (Fresno County 2013). The Bicycle and Regional Trails Master Plan provides a comprehensive, long-term planning horizon for development of an extensive regional bikeway and recreational trails network that connects cities and unincorporated areas countywide. The Plan implements various policies contained in the Transportation and Circulation, and Open Space and Conservation Elements of the County's General Plan (Fresno County 2024).

The Plan was amended in 2013 to meet the requirements of the 2006 Measure "C" Transportation Sales Tax Extension, Local Transportation Program by adding recreational trails to the plan. The Plan coordinates the Regional Bikeway System with existing local bikeway plans that tie into a comprehensive bikeway system; coordinates the Fresno County Regional non-motorized transportation system with adjoining counties; and identifies barriers that inhibit safe and convenient non-motorized travel and develop a list of corrective measures to remove the barriers. The Plan contains Policy BP-A.5, which requires development projects adjacent to designated bikeways to provide adequate rights-of-way or easements.

Fresno Council of Governments Regional Transportation Plan

The latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was prepared by the Fresno Council of Governments (FCOG) and was adopted in July 2022. The RTP/SCS is a blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Fresno County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state, and federal agencies. FCOG prepared the 2022 RTP/SCS to include the new requirements to reduce greenhouse gas (GHG) emissions and improve air quality. Additionally, the RTP/SCS establishes a basis on which funding applications are evaluated. Use of any state or federal transportation funds by local governments must conform to the RTP/SCS, the State Implementation Plan for air quality improvements, and the Federal Transportation Improvement Programs (FCOG 2022a).

3.17.4 Impacts Analysis

3.17.4.1 Methodology

The Proposed Project's potential impacts to transportation have been evaluated using a variety of resources, including the Traffic Impact Study (Tetra Tech 2024c) attached as Appendix N. The Traffic Impact Study evaluated the potential impacts associated with routing Project traffic to and from the Project Area via the anticipated haul routes using the Caltrans Vehicle Miles Traveled-Focused

Transportation Impact Study Guide (Caltrans 2020b) and the Fresno County Senate Bill 743 Implementation Regional Guidelines (FCOG 2020). This was accomplished by evaluating the additional Vehicle Miles Traveled (VMT) caused by Project construction, operations, and decommissioning.

Vehicle Miles Traveled

The VMT metric, aligned with GHG emissions, provides a time-dependent value to quantify traffic impacts and is adopted by the California Natural Resources Agency as a key measure under CEQA for assessing transportation impacts and achieving state climate goals. There is no established threshold of significance for VMT for non-office, residential, or retail use projects in Fresno County. As such, the FCOG CEQA VMT Threshold Guide (FCOG 2020 was used, which states that projects that generate or attract fewer than 500 average daily trips may be assumed to have a less than significant transportation impact. Once constructed, the operation and maintenance of the Project is expected to generate negligible traffic on a typical day. Occasionally (once or twice per month), site visits by a small ground crew would be necessary to respond to abnormal operating conditions, conduct routine maintenance and repairs, panel washing and grounds maintenance. However, a qualitative analysis of the construction related VMT is appropriate given that the construction-related trips and traffic volume are temporary and would cease after construction is completed.

The VMT analysis looked at the estimated number of workers on a weekly basis and multiplied by the approximate distance traveled and the number of times per week that distance is traversed (i.e., commutes happen 10 times per week = 2 times per day). The distances were estimated as follows:

- The site is located far from any major urban areas. The nearby communities include Huron, Turk, Avenal, Kettleman City, Coalinga, Stratford, Lemoore, Armona, Hanford. Farther away are the two larger cites of Visalia and Fresno. In an effort to conservatively estimate where workers would come from, approximately 50 percent of workers are expected to come from Visalia, 12 percent from Lemoore, 12 percent from Hanford, and 26 percent from Coalinga.
- Equipment would only need to make the trip once, but the delivery vehicles would make a return trip for each delivery. Equipment and materials were assumed to be available at the nearest large cities, so it was estimated to originate 50 percent from Bakersfield and 50 percent from Fresno.
- The materials that can be acquired locally are also assumed to be split evenly between Bakersfield and Fresno. The remaining materials such as panels and racking systems would come from the Port of Stockton to the Project Area.

Level of Service

As of July 1, 2020, LOS is no longer an acceptable metric to determine the significance of transportation impacts under CEQA. However, LOS is still commonly used as a qualitative description of roadway segments and intersection operations and is based on the capacity and volume of traffic using a roadway segment or intersection. The LOS at the unsignalized study intersections was calculated using the Highway Capacity Manual (HCM) Methodology. The HCM analysis methodology describes the operation of a roadway or intersection using a range of LOS from LOS A (minimal delay) to LOS F (severely

congested conditions), based on the corresponding control delay experienced per vehicle for unsignalized intersections. Table 3.17-4 describes level of service criteria under the HCM methodology.

Table 3.17-4. Levels of Service Criteria

Levels of Service	Unsignalized Intersection Control Delay (seconds)	Roadway Segment Density (vehicles/mile/lane)
A	<10.0	≤2.0
B	>10.0 to <15.0	>2.0 to 4.0
C	>15.0 to <25.0	>4.0 to 8.0
D	>25.0 to <35.0	>8.0 to 12.0
E	>35.0 to <50.0	>12.0
F	<50.0	Demand exceeds capacity

Note: Roadway segment Level of Service calculated for roadway segments with posted speed limit > 50 miles per hour

Source: Transportation Research Board 2016, 2022

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, transportation impacts are considered significant if implementation of the Proposed Project would result in:

- conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- result in inadequate emergency access

3.17.4.2 Impact Discussion

Threshold 1: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Roadway Facilities

Trip Distribution

It is anticipated that the construction workforce would commute daily from nearby communities and report to the designated construction staging yards before starting work each day, with parking provided onsite. It is assumed the construction workforce would be drawn from within an approximately 45-minute drive to the site. Non-local construction staff are anticipated to stay in hotels in nearby communities like Coalinga, Lemoore, Hanford, or other local communities.

It was assumed that all trips associated with the Project's peak construction activities would be distributed among the three Project subareas (A through C) proportionally. Project construction worker trip distribution patterns were estimated using U.S. Census population data and routes determined based on existing travel times during peak commuting periods.

Project Trip Generation

The Project would consist of three phases: construction, operations and maintenance, and decommissioning. The highest volume of Project-related trips would occur during the peak construction phase; therefore, to provide a conservative estimate of Project Impacts, trip generation for the peak construction phase workforce levels was used for this assessment based on construction operations information provided by the County.

Construction

The primary activity generating the most trips would be construction of the Project, which is expected to include site preparation, panel installation, inspections, and equipment deliveries. Project construction is estimated to last approximately 9 months.

Trip generation data for a photovoltaic solar facility is not available in the Institute of Transportation Engineers *Trip Generation Manual*; however, detailed traffic volumes are known for the Project Area from planning and scheduling of the construction activities as well as San Luis West Solar, LLC's (Applicant) experience with construction and operation of similar solar facilities. Table 3.17-5 provides a summary of construction trip generation estimates by phase. The values shown are conservative and may be higher than actual daily traffic.

Table 3.17-5. Trip Generation Estimates – By Phase

Construction Phase*	Duration (weeks)	Construction Workforce	Average Daily Worker Trips†	Average Daily Vendor Deliveries	Average Daily Haul Deliveries	Average Daily Heavy Vehicle Trips‡
Site Preparation and Grading	8	40	74	25	30	110
Solar Arrays and Inverters Installation	12	200	370	25	12	74
Electrical Work	8	60	112	4	2	12
Substation Installation	8	60	112	20	20	80
Transmission Interconnection	4	20	38	4	20	48

Notes: * = Construction phasing, duration, and workforce levels provided by San Luis Solar, LLC (Applicant).
† = Assumes one inbound and one outbound trip per vehicle per day. Accounts for 15% of workforce carpooling with a Vehicle Occupancy Rate of 2.0.
‡ = Assumes one inbound and one outbound trip per heavy vehicle per day.

Source: Tetra Tech 2024c

The maximum (peak) number of construction workforce levels onsite at any one time would be 200 individuals. For a conservative analysis the traffic report prepared for the Project utilized a daily quantity of 300 onsite construction workers as the peak number of construction workers onsite. The final two construction phases, Substation Installation and Transmission Interconnection, would experience significantly fewer construction workforce levels (60 and 20 workers, respectively).

Construction will mainly occur during daylight hours, Monday through Friday from 7:00 a.m. to 6:00 p.m., with additional hours or days possible to meet the schedule. Any construction outside normal hours will be coordinated with the appropriate agencies and conform to Fresno County Noise regulations.

Table 3.17-6 provides a summary of the temporary increase in traffic associated with the Project's peak construction phase, which is anticipated to occur over an approximate 3-month period during the Project's 9-month construction period.

Table 3.17-6. Project Peak Construction Trip Generation Estimates

Vehicle Type	Daily Quantity	Daily Trips*	Morning Peak Hour		Evening Peak Hour	
			Inbound	Outbound	Inbound	Outbound
Workers	300	556	278	0	0	278
Vendor Trucks	54	108	16	16	16	16
Haul Trucks	44	88	13	13	13	13

Table 3.17-6. Project Peak Construction Trip Generation Estimates						
Vehicle Type	Daily Quantity	Daily Trips*	Morning Peak Hour		Evening Peak Hour	
			Inbound	Outbound	Inbound	Outbound
Total Trips		752	307	29	29	307

Note: * A carpool factor of 15 percent was applied to worker trips.

Source: Tetra Tech 2024c

During peak construction, it is anticipated that up to 98 offsite delivery trucks (e.g., trucks delivering materials from offsite locations), would be needed. Approximately 30 percent of delivery truck traffic to and from the Project Area is anticipated to occur during the weekday morning and evening peak hours.

Although construction is expected to have minimal impact to the study area roadways and intersections, Mitigation Measure TRANS-1 would implement a Construction Traffic Management Plan (CTMP) to minimize potential Project-related traffic impacts along West Jayne Avenue and SR-269.

Operations and Maintenance

Once constructed, the Project will be operated remotely, seven days per week, year-round. Remote operators will continuously monitor plant output, voltage, and local weather conditions, receiving real-time alerts for any abnormal conditions and dispatching technicians as needed. Onsite O&M activities will include responding to abnormal conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance. A conservative estimate of trip generation for operations would assume four workers would visit the site from the City of Fresno every other week, a maximum of 26 times per year during operations. Trip generation during the Project's O&M lifecycle (minimum of 35 years) is considerably smaller than the construction related trip generation.

Decommissioning

Decommissioning occurs at the end of a facility's useful life. This could be well beyond the initial operational period, as primary Project components can be upgraded and replaced as needed to extend the operational lifespan of the facility by several decades. Nonetheless, at the point when the Project reaches the conclusion of its useful life, decommissioning will take place in a similar fashion to construction, but simply in reverse. Because of this, estimation of VMT was assumed to be the same as that generated by construction.

Level of Service Analysis

LOS is no longer an acceptable metric to analyze transportation impacts under CEQA. However, the Fresno County General Plan Transportation and Circulation Element Policy TR-A.3 sets LOS thresholds. Under the County's General Plan, rural county roadways must maintain a LOS D or better.

Potential impacts to traffic and circulation have been evaluated for each of the following conditions:

- 2024 Existing Conditions

- 2024 Existing Plus Project Conditions
- 2025 Cumulative Conditions
- 2025 Cumulative Plus Project

2024 Existing Conditions

Under existing traffic conditions, all study area roadway segments are currently operating well below capacity at LOS A operations (see Table 3.17-2). All study area intersections are currently operating below capacity at LOS C or better during the weekday morning and evening commuter peak hours (see Table 3.17-3).

2024 Existing Plus Project Conditions

2024 Existing Plus Project Road Segment Operations

A peak hour roadway segment LOS analysis was conducted for study area roadways to evaluate the 2024 Existing Plus Project. Based on the appropriate significance criteria, study area roadway segments are anticipated to operate well below capacity at LOS B or better operations, which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

2024 Existing Plus Project Intersection Operations

An intersection operations analysis was conducted to evaluate the 2024 Existing Plus Project weekday morning and evening peak hour conditions. The study area intersections are anticipated to operate below capacity at LOS C or better for the 2024 Existing Plus Project weekday commuter peak hour conditions which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

2025 Cumulative Conditions

A list of cumulative projects within a 6-mile radius of the Project Area was obtained from the Fresno County Planning and Natural Resources Database. The Key Energy Storage Project was identified as a project that would likely add traffic to the study area roadway segments and intersections in the design year 2025.

2025 Cumulative (Without Project) Roadway Segment Operations

A peak hour roadway segment LOS analysis was conducted for the study area to evaluate the 2025 Cumulative (Without Project) conditions. The study area roadway segments are anticipated to operate well below capacity at LOS A.

2025 Cumulative (Without Project) Intersection Operations

An intersection operations analysis was conducted for the study area to evaluate 2025 Cumulative (Without Project) weekday morning and evening peak hour conditions. The study area intersections are anticipated to operate below capacity at LOS C or better during both of the weekday commuter peak hours.

2025 Cumulative Plus Project

2025 Cumulative Plus Project Roadway Segment Operations

A peak hour roadway segment LOS analysis was conducted for the study area to evaluate the 2025 Cumulative Plus Project conditions. The study area roadway segments are anticipated to operate at well below capacity at LOS B or better under 2025 Cumulative Plus Project conditions, which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

2025 Cumulative Plus Project Intersection Operations

An intersection operations analysis was conducted for the study area to evaluate 2025 Cumulative Plus Project weekday morning and evening peak hour conditions. The study area intersections are anticipated to operate below capacity at LOS C or better both peak hours which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

The addition of Proposed Project traffic to existing, existing plus project conditions, cumulative conditions, and cumulative plus project conditions would not result in any of the study roadway segments or intersections to operate at an unacceptable LOS level. All roadway segments or intersections would operate at LOS D or better. As such, the Proposed Project is anticipated to be consistent with the Fresno County General Plan Transportation and Circulation Element.

Transit Services

Public transportation in the Project rea is provided by the FCRTA. Coalinga Transit travels on SR-269 through the area via West Jayne Avenue and SR-269. No transit stops are located within the Project Area. No impact would occur.

Bicycle and Pedestrian Facilities

There are currently no dedicated pedestrian or bicycle facilities in the immediate vicinity of the Project Area or along the surrounding roadways or highways. No impact would occur.

Threshold 2: Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3, subdivision (b) details the use of VMT to assess the significance of transportation impacts. As detailed in CEQA Guidelines section 15064.3, subdivision (c), a lead agency may elect to be governed by the provisions of this section immediately.

This references the VMT metric as used to analyze transportation impacts. VMT was quantified in the Traffic Impact Study conducted for the Proposed Project (see Appendix N). Because this Project has a small amount of VMT being generated, largely only during construction, it is anticipated to have a less than significant impact. The results of the VMT analysis for construction, operations, and decommissioning are discussed below.

Construction

The Project would represent an increase in VMT during the nine-month construction period compared with the existing agricultural cultivation uses at the Project location. Once construction is completed, no permanent O&M staff would be located in the Project Area.

Table 3.17-7 provides the results of the VMT analysis for the construction portion of the Project. The full analysis with VMT per worker commute origin and heavy vehicle delivery origin is shown in the Traffic Impact Study in Appendix N.

Table 3.17-7. Construction Vehicle Miles Traveled

VMT Type	VMT per Construction Phase					Total VMT
	Site Preparation and Grading	Solar Arrays and Inverters Installation	Electrical Work	Substation Installation	Transmission Interconnection	
Total Passenger Vehicle	67,336	505,018	101,913	101,913	17,289	**793,469**
Total Heavy Vehicle	454,960	459,096	49,632	330,880	99,264	**1,393,832**
Grand Total Construction	522,296	964,114	151,545	432,793	116,553	**2,187,301**

Note: VMT = Vehicle Miles Travelled

Source: Tetra Tech 2024c

Operations

Operational VMT is considerably smaller than the construction VMT. As mentioned previously, on a typical day, no workers would be visiting the site. A conservative estimate of the VMT for operations would assume four workers would visit the site from the City of Fresno every other week, a maximum of 11,024 VMT per year during operations. This rate would be typical throughout the operational life of the Project. There would likely be occasional larger repair or maintenance operations such as panel washing, but these would be infrequent and of short duration. Given the short duration and infrequency of the repairs, these occurrences would add so few VMT that it is not a meaningful inclusion in the analysis. Over the estimated 35-year period the total VMT for operations is likely less than 385,840 miles. Given that the daily Project generated trips would be fewer than the 500 average daily trips FCOG threshold. Impacts would be less than significant.

Decommissioning

Decommissioning would generate trips and VMTs very similar to that of construction. For that reason, additional quantitative analysis for decommissioning was not included for this analysis.

Furthermore, the significance of these additional VMT were evaluated based on the three guidance criteria from the State of California Office of Planning and Research (OPR) December 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (CEQA 2018) including "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

There is no established threshold of significance for VMT for non-office, residential, or retail use projects in Fresno County. Since no quantitative threshold has been identified, the significance of the additional miles traveled due to the Project will be evaluated based on the three guidance criteria from Appendix G of the CEQA Guidelines and also compared to the FCOG's RTP/SCS goals.

Reduction of Greenhouse Gas Emissions

The Project is a solar and BESS facility and the chief aim of constructing solar facilities is the reduction of dependence on GHG-emitting fossil fuel energy sources. The Project would provide clean renewable energy for approximately 35 years once completed. Additionally, the Applicant prepared an Air Quality and Greenhouse Gas Technical Report for Fresno County, which concluded a *less than significant impact* for both construction and operations emissions (Tetra Tech 2025c). This report identified a quantitative threshold of significance for GHG emissions. The analysis included in that report accounted for construction traffic emissions to determine the total emissions for the Project. Using this definitive quantitative metric yielded a *less than significant impact*. Based on this conclusion, a threshold value for VMT would likely be much higher than the Project-generated VMT. This assertion is in line with the fact that the guidance for conducting VMT analysis originated with GHG emissions reduction regulations and goals and the guidance states "OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so" (CEQA 2018).

Development of Multimodal Transportation Networks

This criterion is not relevant to the Proposed Project.

Diversity of Land Use

According to CEQA (2018), "State law concerning the development of multimodal transportation networks and diversity of land uses requires planning for and prioritizing increases in complete streets and infill development but does not mandate a particular depth of implementation that could translate into a particular threshold of significance."

The Project would diversify land use by changing the current use from minimally developed cropland and an orchard to renewable energy production. While the Project would increase the VMT from minimally developed to developed conditions, nearly all of the VMT are added during a relatively short construction time window. The expected facility maintenance would generate infrequent and light traffic during operations, and it is anticipated that eventually maintenance visits would be reduced to once a month or less and not impact peak hour traffic. At the end of the Project's life, decommissioning would generate trips and miles traveled very similar to construction. Development of the Project would therefore support California's statutory energy goals—reduction of GHGs through development of a source of solar energy and a diversity of land uses.

The development of the Project would support the goals of CEQA and the FCOG with regard to diversifying land use and reducing greenhouse gas emissions. The majority of VMT generated by the Project will occur over a short period of time during construction, after which the Project will generate renewable energy for approximately 35 years and support a sustainable future for Fresno County while generating an extremely low VMT per year. As such, the Project impacts will be less than significant and no mitigation is recommended.

Threshold 3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No geometric design features will be constructed or modified as part of this Project. The roadways utilized by the Project have been deemed adequate for the conveyance of materials, equipment, and workers; therefore, the Project impacts would be less than significant.

Threshold 4: Would the project result in inadequate emergency access?

The Proposed Project is located in a rural area with the primary access roads (West Jayne Avenue and State Route 269) allowing adequate egress and ingress to the site in the event of an emergency. Additionally, as part of the Proposed Project, existing interior access roads may be improved with the addition of an aggregate base or other native material with a soil stabilization material, which would be designed to meet applicable operations and maintenance and public safety access requirements. The Project would not hinder emergency access to the Project Area or to other roadways in or around the Project vicinity; therefore, the impact would be less than significant.

Although the Project is expected to have minimal impact to study area roadways and intersections, mitigation measures have been considered to improve the safety of the construction workforce and all other road users, as detailed below and per the Traffic Impact Analysis Report prepared for the Project.

3.17.5 Mitigation Measures

TRANS-1: **Construction Traffic Management Plan.** Prior to the issuance of a construction permit by the County, a CTMP shall be prepared by the Project Proponent and submitted to the County for review/approval. The CTMP would minimize potential Project-related traffic impacts. West Jayne Avenue and SR-269 are high-speed roadways that would serve as the primary access to the Project Area. If requested by Caltrans or Fresno County Public Works staff, temporary construction zone speed restrictions may be implemented along West Jayne Avenue and SR-269 to encourage motorists to slow down through the study area. The CTMP may include variable message boards and additional signage along West Jayne Avenue and SR-269 alerting motorists of the increased turning activity in the vicinity of the site driveways and access roads and to watch for slow-moving traffic. The CTMP shall also include Travel Demand Management measures to encourage non-single occupancy vehicle trips and minimize reliance on single-occupant vehicles and reduce single occupancy vehicle trips to and from the Project Area.

3.17.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.18 Tribal Cultural Resources

3.18.1 Introduction

This section provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the Proposed Project. Impacts to tribal cultural resources are considered significant if the Proposed Project would cause a substantial adverse change in the significance of a tribal cultural resource that is (1) listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in Public Resources Code (PRC) section 5020.1 (k); or (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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The analysis is based on results of the Native American consultation conducted by Fresno County (County) for purposes of compliance with CEQA requirements prompted by Assembly Bill (AB) 52) and the following technical document:

- Negative Phase I Archaeological Survey Report, San Luis West Solar Project (Tetra Tech 2025g; Appendix J).

3.18.2 Environmental Setting

The Project Area is currently a cultivated field within the San Joaquin Valley. The San Joaquin Valley is part of the larger Central Valley agricultural region of California. To the west of the Project is the Coastal Range, and to the east of the valley is the Sierra Nevada Mountain Range.

The Central Valley is a forearc basin field with several thousand feet of sedimentary deposits that overlay Sierran basement rocks. The Project Area deposits consist of Quaternary (Late Holocene) Great Valley alluvium fan deposits of unconsolidated cobbles, gravel, and sand. The predominant soil series of the Project Area consists of Westhaven loam, Excelsior sandy loam, and sandy substrates to depths of 72 inches.

The elevational range of the Project Area is approximately 325 to 340 feet above mean sea level and is located within the San Joaquin River and Kings River watershed. The Project lies approximately 7 to 8 miles north-northwest of the Tulare Lake basin region and associated marshland and shoughs. The lakebed is a sink that was an extant lake in prehistory but is now dry due to runoff being diverted historically for agriculture.

3.18.3 Cultural Context

The cultural chronology of human occupation in the Central Valley is characterized by changing settlement and subsistence strategies in response to environmental conditions and available resources. Historically, the Project region population increased through the development of infrastructure (e.g., railroads) and economic resources (e.g., agriculture and ranching).

3.18.3.1 Pre-Contact Overview

There is no single cultural historical framework that encompasses the entire precontact record of the Central Valley. The generalized cultural sequence includes the Paleo-Indian Period (13,500–10,500 calibrated years before the present [cal B.P.]), Lower Archaic Period (10,500–7,500 cal B.P.), Middle Archaic Period (7,500–2,500 cal B.P.), Upper Archaic Period (2,500 cal B.P.–calibrated anno domini [cal A.D.] 1000), and Emergent Period (cal A.D. 1000–Historic).

Archaic Period

The Lower Archaic Period is characterized by isolated finds of stemmed points (similar to Borax Lake, Lake Mojave, Siler Lake, and Pinto wide stem types), stone crescents, and other distinctive, formalized, flaked stone artifacts (Rosenthal et al. 2007).

The Middle Archaic climate was characterized by warmer and drier conditions facilitating the reduction or complete desiccation of Central Valley lakes. This period is categorized by projectile points such as notched, stemmed, thick-leaf, and narrow concave base darts, groundstone, pottery, twined basketry, basketry awls, and polished stone plummets. At this time, the classic Windmiller Pattern burial mounds occur. This pattern represents riverine adaptions that were permanent, year-round, habitation sites.

The Upper Archaic climate was cooler and wetter. Populations were characterized by geographically complex sociopolitical organizations as evident from archaeological burial data (e.g., contrasting burial postures), artifact styles, and other items of material culture. Specialized technologies appeared during the Upper Archaic Period such as bone tools and implements and the production of saucer and saddle-shaped shell beads (*Olivella*) and ornaments (*Haliotis*), and ceremonial obsidian blades. This period was also marked by mortar and pestle use. Artifact assemblages from the period includes temporally diagnostic forms *Olivella* and *Haliotis*, charm stones (often found cached), cobble mortars, chisel ended pestles, and dart points. Other diagnostic artifacts include a wide array of bone tools including awls, fish spears, saws, and flake tools.

During the transition from the Upper Archaic Period to the Emergent Period, the Central Valley experienced drier conditions resulting in resource depression of valley and lowland resources. Native groups abandoned the valley floor and relocated to upland resource areas. As the climate improved, people expanded downslope again to the valley floor.

Emergent Period

The Emergent Period is characterized by the appearance of bow-and-arrow technology, the rise of wealth-linked social status, the specialization of bead manufacturing, and increased social complexity as indicated by increased variation in burial types and furnishings. This period is also marked by the intensification of plant resources, and the use of the mortar and pestle. Artifact assemblages are characterized by small corner-notched and side-notched projectile points, *Olivella* lipped and clam disc beads and bead drills, magnesite cylinders, hopper mortars, pottery, clay balls, and village sites with house pits (Rosenthal et al. 2007).

3.18.3.2 Ethnohistory

The Project Area is within the ancestral lands of the Southern Valley Yokuts people, who spoke a branch of the Penutian (Yok-Utian) language family. The Yok-Utian language is divided into only two distinct subbranches: the Miwok-Costanoan and Yokuts.

The Yokuts fall into three geographical divisions, the Foothill Yokuts, Southern Valley Yokuts, and Northern Valley Yokuts. The Southern Valley Yokuts aboriginal lands extended within the upper end of the San Joaquin Valley, from the lower Kings River to the Tehachapi Mountains and encompassed Tulare, Buena Vista, and Kern lakes and their connecting sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern rivers. The Southern Valley Yokuts generally established villages on low, natural rises along lakes, major water courses, or tributaries. These water sources supported a large variety and abundance of natural floral, aquatic, and faunal resources.

The Tulare Lake basin was inhabited by three Yokuts tribes: the Tachi, the Wowol, and the Chunut. Tribal boundaries were fixed, but friendly relations prevailed between local groups, and the Tulare Lake tribes shared their abundant resources with outsiders. The current Project Area is within the ancestral lands of the Tachi Tribe.

The Yokuts practiced a mixed economy of resource procurement and focused on fishing, hunting, fowling, and collecting freshwater shellfish, as well as plant resources such as roots and seeds. The Yokuts were proficient fishers, implementing various strategies, such as nets, hooks, diving with nets, conical basketry traps, spears, two-prong harpoons, bow and arrow (albeit to a lesser extent), and the use of turkey mullein (*Eremocarpus setigerus*), a plant toxin that would stun fish and bring them to the surface. Seeds, roots, and grasses, such as tule, nutty roots, grassnuts, clover, fiddle-neck, and alfilaria, provided a large portion of the diet.

The family units of the Southern Valley Yokuts formed groups or triblets, averaging between 300 to 350 members living in villages. Residential areas were typically located upon raised elevations near resource and water sources, such as Tulare Lake Basin, creeks, and river drainages. Villages were occupied most of the year until late spring, when families would venture out for several months to collect seed-plant and other resources. The Southern Valley Yokuts were immensely involved in trading resources with neighboring tribes, trading items such as fish, seeds, baskets, and hides in exchange for other goods (e.g., obsidian, salt). Historic contact between the Southern Valley Yokuts and European immigrants took a devastating toll on the indigenous people, beginning with the Spanish in the 1770s. Military raids, disease, epidemics, and forced servitude claimed many indigenous lives during the Spanish, Mexican, and American periods.

In 1921, the Santa Rosa Rancheria was established on 40 acres of farmland in Lemoore, California. By 1980, the Santa Rosa Rancheria had 200 Tachi-Yokut tribal members and 170 acres of land. The Tachi-Yokut tribe is a state- and federally recognized tribe. Today, the Rancheria has grown to include over 1,800 acres, has an active tribal government and programs.

3.18.4 Regulatory Setting

3.18.4.1 Native American Correspondence and AB 52 Consultation

The Native American Heritage Commission (NAHC) maintains a confidential Sacred Lands File (SLF), which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on November 4, 2020 to request a search of the SLF. The NAHC responded to the request in a letter dated November 20, 2020 indicating that the results were negative. The SLF request and response from the NAHC are included as Appendix J.

Pursuant to AB52, formal government-to-government consultation is required by the lead CEQA agency. Coordination and consultation with Native American tribes may provide additional tribal ecological knowledge regarding tribal cultural resources (PRC Section 21074 [a][1][A]-[B]).

The NAHC list includes the following tribes:

- Big Sandy Rancheria of Western Mono Indians (Federally Recognized)
- Chicken Ranch Rancheria of Me-Wuk Indians
- Cold Springs Rancheria of Mono Indians (Federally Recognized)
- Dumna Wo-Wah Tribal Government
- Dunlap Band of Mono Indians
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- North Fork Nomo Tribe
- Picayune Rancheria of Chukchansi Indians
- Kings River Choinumni Farm Tribe
- Santa Rosa Rancheria Tachi Yokut Tribe
- Table Mountain Rancheria (Federally Recognized)
- Traditional Choinumni Tribe
- Wuksache Indian Tribe/Eshom Valley Band

3.18.4.2 Federal

There are no applicable federal regulations for this issue area.

3.18.4.3 State

Native American Heritage Commission

PRC Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerald "Jerry" Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to CEQA Guidelines Appendix G, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded 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 (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process,

or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an Environmental Impact Report or adopt a Mitigated Negative Declaration (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process, shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

3.18.4.4 Local

Fresno County General Plan

The County's General Plan Open Space and Conservation Element (OS), Historical, Cultural, and Geological Resources sections contains several objectives and policies relevant to the preservation of cultural resources through development review, acquisition, encouragement of easements, coordination with other agencies and groups, and other methods (Fresno County 2024). The applicable goals and policies include the following:

- *Goal OS-J:* To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment, and promote and encourage preservation, restoration, and rehabilitation of Fresno County's historically significant resources in order to promote historical awareness, community identify, and to recognize the county's valued assets that have contributed to past county events, trends, styles of architecture, and economy.
    - *Policy 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.

3.18.5 Impact Analysis

3.18.5.1 Methodology

The Proposed Project's potential impacts to tribal cultural resources have been evaluated using a variety of resources, including a record search, pedestrian survey, and SLF search conducted by the NAHC (also see Section 4.5, Cultural Resources, of this Draft EIR). Further information regarding the presence of tribal cultural resources can be acquired upon inquiry with the relevant Native American groups and individuals on the County's Master List (see Appendix J for list), in accordance with AB 52 via the lead CEQA agency and government-to-government consultation. On January 3, 2025, the County sent Project notification

letters to the following California Native American tribes during the EIR process pursuant to 21080.3.1(d) of the Public Resources Code:

- Big Sandy Rancheria of Western Mono Indians (Federally Recognized)
- Chicken Ranch Rancheria of Me-Wuk Indians
- Cold Springs Rancheria of Mono Indians
- Dumna Wo-Wah Tribal Government
- Dunlap Band of Mono Indians
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- North Fork Nomo Tribe
- Picayune Rancheria of Chukchansi Indians
- Kings River Choinumni Farm Tribe
- Santa Rosa Rancheria Tachi Yokut Tribe
- Table Mountain Rancheria (Federally Recognized)
- Traditional Choinumni Tribe
- Wuksache Indian Tribe/Eshom Valley Band

No responses were received from any of the tribes notified under AB 52 for this Project.

3.18.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, tribal cultural resources impacts are considered significant if implementation of the Proposed Project would result in:

- A substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
    - a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.18.5.3 Impact Discussion

Threshold 1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?

or

Threshold 2: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources 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 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1? In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No tribal cultural resources were identified through the record search, pedestrian survey, and SLF search conducted by the NAHC, nor as part of the County's government-to-government notification and consultation efforts with interested Native American groups conducted pursuant to AB 52. Given that no tribal cultural resources have been identified within or immediately adjacent to the Project Area, the Project is not expected to cause a substantial adverse change in the significance of a tribal cultural resource. However, in the event that buried significant tribal cultural resources are encountered during Project construction, significant impacts could occur. Implementation of Mitigation Measures TCR-1 through TCR-3 would ensure that impacts would be less than significant.

3.18.6 Mitigation Measures

TCR-1: **Tribal Cultural Resource Worker Education/Training.** Prior to Project construction-related, ground-disturbing activities (e.g., vegetation removal, excavation, trenching, and grading), the Project Applicant shall retain a qualified representative from a local Native American tribe to conduct a tribal cultural resource worker education awareness program for Project construction personnel. During construction, the local Native American tribal representative(s) shall provide the training to all new construction personnel. The cultural resource training shall include:

- an overview of applicable laws and penalties pertaining to disturbing tribal cultural resources;

- a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area;
- types of tribal cultural resources found in the area,
- instruction that Project workers shall halt construction if a tribal cultural resource is inadvertently discovered during construction; and
- procedures to follow if an inadvertent discovery is encountered (Inadvertent Discovery Plan discussed below), including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs).

TCR-2: **Tribal Cultural Resource Monitoring.** Prior to ground-disturbing construction activities, the Project Applicant shall retain a Secretary of the Interior-qualified Project archaeologist to prepare and implement a Cultural Resource Monitoring Plan (Plan or Monitoring Plan) that shall outline the procedures for monitoring. The qualified Project archaeologist shall also coordinate and schedule Project archaeological and local Native American (as applicable) monitors during Project construction. The Plan shall be submitted to the County for review and approval.

The Plan shall include (but not be limited to) the following:

- identification of qualified monitors;
- monitor responsibility and daily reporting;
- schedules;
- applicable laws;
- inadvertent discovery procedures (see TCR-3 below);
- monitoring frequency; and
- final reporting at the completion of the Project.

The report shall be submitted to the County and the Southern SSJVIC.

TCR-3: **Inadvertent Discovery of Archaeological or Tribal Cultural Resources During Construction.** A Secretary of the Interior-qualified Project archaeologist shall prepare an Inadvertent Discovery Plan as part of the Monitoring Plan for the Project. The local Native American tribal representative(s) shall be invited to participate in drafting any tribal cultural resources protocols for the Inadvertent Discovery Plan, if requested.

The Inadvertent Discovery Plan shall provide protocols and notification procedures in the event of an inadvertent discovery. If subsurface archaeological or tribal cultural resources are discovered during Project construction (e.g., ground-disturbing activities such as vegetation removal, excavation, trenching, and grading), all ground-disturbing activities within 50 feet of the find shall cease and the qualified Project archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the qualified Project archaeologist shall determine appropriate avoidance measures or other appropriate mitigation in consultation with the implementing

agencies and any local consulting Native American groups expressing interest. Under CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified Project archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local consulting Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, the site shall be treated in accordance with the provisions of Section 21083.2

3.18.7 Level of Significance After Mitigation

Project-related impacts associated with tribal cultural resources would be less than significant with implementation of the aforementioned mitigation measures.

3.17 Transportation

3.17.1 Introduction

This section describes the affected environment, regulatory setting, and Project impacts for transportation and traffic. Impacts to transportation are considered significant if the Proposed Project would (1) conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; (2) conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b); (3) substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or (4) result in inadequate emergency access.

The analysis is based on the following technical document included as an appendix to the Draft EIR:

- San Luis West Solar Project Traffic Impact Study (Tetra Tech 2024c; Appendix N).

3.17.2 Environmental Setting

The Project Area is in an unincorporated, rural area of southern Fresno County (County), approximately 10 miles northwest of Kettleman City and approximately 1.5 miles east of Interstate (I) 5. The surrounding land uses consist primarily of agricultural uses. Access from public roads to the Project Area would be via main entrances along West Jayne Avenue and State Route (SR) 269. A network of agricultural roads within the Project Area would be utilized for ingress and egress throughout Project construction. No public road improvements are proposed as a part of the Project, unless required by the County. The Project Area is primarily agricultural land, zoned AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) or AE-40 (Exclusive Agriculture, 40-acre minimum parcel size) in the unincorporated areas of Fresno County. The parcels in the general vicinity of the Project Area are similarly zoned. Within this zoning district, Fresno County permits utility-scale solar energy uses with an Unclassified Conditional Use Permit. Existing agricultural roads within the Project Area would be used for access during construction. No road improvements have been proposed as a part of the Project at the time of this report. The Project Area includes three subareas, shown in Figure 2 as Subareas A, B, and C. These Subareas are defined below:

- Subarea A would include approximately 280 acres of solar arrays and associated infrastructure (i.e., internal roads, medium voltage collection lines, substation, Battery Energy Storage System [BESS] and Project Operations and Maintenance [O&M] building) located on four parcels totaling approximately 800 acres, of which approximately 650 acres are currently leased by the Project and approximately 150 acres are owned by the Project. Subarea A is located southeast of the existing Pacific Gas and Electric Company Gates Substation, immediately south of West Jayne Avenue and approximately 0.5 mile due west of SR-269. The Substation will also be located within Subarea A and it is anticipated that the BESS will be collocated with the Substation in Subarea A. Two temporary laydown areas totaling approximately 10 acres would be located in Subarea A, along West Jayne Avenue.

- Subarea B would include approximately 250 acres of solar arrays and associated infrastructure (i.e., internal roads and medium voltage collection lines) on one parcel, consisting of approximately 300 acres of fully leased land. Subarea B is bordered by SR-269 to the west, West Jayne Avenue to the south, and active row crops to the east.
- Subarea C would include approximately 240 acres of solar arrays and associated infrastructure (i.e., internal roads and medium voltage collection lines) on approximately 325 acres of land leased by the Project. Subarea C consists of two parcels located just west of the California Aqueduct. West Jayne Avenue bisects Subarea C.

3.17.2.1 Roadways

Major Highways

I-5 is the only major transportation route near the Project Area. This Interstate would provide regional access to the general vicinity of the Proposed Project during the construction and operation phases. I-5 is a major, four-lane divided freeway that extends north from the Mexican border to the Canadian border and provides access for goods movement, shipping, and travel. This highway crosses the western portion of Fresno County and is designated as major highway by the Fresno County General Plan Transportation and Circulation Element due to its significance for regional and interstate travel, as well as for the movement of goods and people. It is anticipated that primary access to the Project Area will originate via I-5 to exit 325, West Jayne Avenue; a paved Fresno County Road featuring one lane of traffic in each direction (east and west). From there, traffic will travel eastbound along West Jayne Avenue to the Proposed Project Area.

Another highway within the vicinity of the Project that may provide access includes SR-269 (Lassen Avenue), an undivided conventional state highway near the center of the Project Area, that runs north to south, connecting the City of Avenal to north to the community of Huron, and West Jayne Avenue, which spans the central valley east-west. SR-269 has two 12-foot-wide travel lanes and paved shoulders.

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there is one Designated State Scenic Highway within Fresno County, SR-180, located approximately 55 miles northwest of the Project Area.

Local Roads

Most roadways in the immediate Project Area vicinity consist of unnamed, unpaved agricultural roads. There is one local county road, West Jayne Avenue, in the vicinity of the Project Area. West Jayne Avenue is a paved two-lane road that crosses from east to west and bisects the Project Area.

There are three private roads in the vicinity of the Project Area. These are West Phelps Avenue, South Madera Avenue, and West Tractor Avenue. West Phelps and West Tractor avenues are east-west alignments, and South Madera Avenue is a north-south alignment. These are rural unpaved roads providing access to the surrounding agricultural fields.

Study Area

The study area chosen for the transportation analysis in the Traffic Impact Analysis includes key roadways and intersections in the Project Area vicinity that would be most affected by construction of the Project (Tetra Tech 2024c). The study area roadway segments include:

- West Jayne Avenue west SR-269 (Lassen Avenue)
- West Jayne Avenue east SR-269 (Lassen Avenue)
- SR-269 south of West Jayne Avenue
- SR-269 north of West Jayne Avenue

The study area intersections include:

- West Jayne Avenue at I-5 southbound ramps
- West Jayne Avenue/South Butte Avenue at I-5 northbound ramps
- West Jayne Avenue at SR-269 (Lassen Avenue)
- SR-269 (Lassen Avenue) at I-5 northbound ramps
- SR-269 (Lassen Avenue) at I-5 southbound ramps
- West Jayne Avenue At Existing Farm Road/Site Access 1
- West Jayne Avenue at Proposed Site Access 2
- West Jayne Avenue at existing Farm Road/Site Access 3
- West Jayne Avenue at Proposed Site Access 4
- West Jayne Avenue at existing Farm Road/Site Access 5
- West Jayne Avenue at Proposed Site Access 6
- West Jayne Avenue at Proposed Site Access 7
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 8 (Firestone Avenue)
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 9
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 10
- SR-269 (Lassen Avenue) at Existing Farm Road/Site Access 11 (West Phelps Avenue)
- West Jayne Avenue at Existing Farm Road/Site Access 12
- West Jayne Avenue at Proposed Site Access 13
- West Jayne Avenue at Proposed Site Access 14

- West Jayne Avenue at Existing Farm Road/Site Access 15 (South Madera Avenue)

3.17.2.2 Airports

There are no airports in the vicinity of the Project Area. The nearest airport to the Project Area is the New Coalinga Municipal Airport, located approximately 9 miles to the west. The nearest major airport is the Fresno Yosemite International Airport, which is over 40 miles northeast from the Project Area. The nearest military facility is Naval Air Station Lemoore, approximately 11 miles to the northeast.

3.17.2.3 Public Transportation

Public transportation in the Project Area is provided by the Fresno County Rural Transit Agency (FCRTA), which offers fixed transit routes and a Dial-a-Ride public transportation service for residents in 18 cities, towns, and unincorporated communities. Additionally, the FCRTA offers the Coalinga Transit route which operates a once daily inbound trip from Coalinga to Fresno in the morning and a once daily outbound trip from Fresno to Coalinga in the evening. Coalinga Transit travels on SR-269 through the area via West Jayne Avenue and SR-269. No transit stops are located within the Project Area (Tetra Tech 2024c).

3.17.2.4 Non-Motorized Transportation

There are currently no dedicated pedestrian or bicycle facilities in the immediate vicinity of the Project Area or along the surrounding roadways or highways. SR-269 (Lassen Avenue) in the Project Area is shown as an *existing or planned bikeway* in the Fresno County General Plan (Transportation and Circulation Element). Bicycles are allowed on SR-269, and the shoulder is 2 to 8 feet along the rural two-lane highway.

3.17.2.5 Existing Traffic Volume

Existing traffic volumes were developed based on recent intersection turning movement counts collected at study area intersections (Tetra Tech 2024c). Existing average daily traffic volumes for key roadways in the immediate vicinity of the Project Area are provided in Table 3.17-1.

Table 3.17-1. Existing Daily Traffic Volumes

No.	Segment	Average Daily Traffic			Heavy Vehicle Percentage		
		NB/EB	SB/WB	Combined	NB/EB	SB/WB	Combined
1	West Jayne Avenue east of I-5	1,889	1,760	3,649	15%	18%	16%
2	SR-269 south of West Jayne Avenue	1,507	1,456	2,963	19%	21%	20%

Notes: EB = eastbound; I = Interstate; NB = northbound; SB = southbound; SR = State Route; WB = westbound
Existing daily traffic volumes based on automatic traffic recorder counts collected on Wednesday, September 4, 2024.

Source: Tetra Tech 2024c

3.17.2.6 Existing Roadway Segment Operations

A peak hour roadway segment Level of Service (LOS) analysis was prepared for existing conditions in the study area. Table 3.17-2 provides existing weekday peak hour roadway segment LOS.

Table 3.17-2. 2024 Existing Weekday Peak Hour Roadway Segment LOS

No.	Roadway Segment	AM Peak Hour				PM Peak Hour			
		Direction 1 (NB/EB)		Direction 2 (SB/WB)		Direction 1 (NB/EB)		Direction 2 (SB/WB)	
		Vehicle Density	LOS	Vehicle Density	LOS	Vehicle Density	LOS	Vehicle Density	LOS
1	West Jayne Avenue (west of SR-269)	0.2	A	1.8	A	1.3	A	0.3	A
2	West Jayne Avenue (east of SR-269)	0.2	A	1.2	A	0.6	A	0.2	A
3	SR-269 (north of West Jayne Avenue)	0.5	A	1.2	A	1.4	A	0.9	A
4	SR-269 (south of West Jayne Avenue)	0.3	A	0.6	A	0.5	A	0.5	A

Notes: EB = eastbound; LOS = Level of Service; NB = northbound; SB = southbound; SR = State Route; WB = westbound

Source: Transportation Research Board, Highway Capacity Manual 7th Edition Methodology

As shown in Table 3.17-2, all study area roadway segments are currently operating well below capacity at LOS A operations.

3.17.2.7 Existing Intersection Operations

An intersection LOS analysis was prepared for existing conditions of all study area intersections. Table 3.17-3 provides the results of the existing intersection LOS analysis.

Table 3.17-3. 2024 Existing Weekday Peak Hour Intersection LOS

No.	Intersection & Movement		AM Peak Hour				PM Peak Hour			
			V/C	Delay*	LOS	95th Q† (feet)	V/C	Delay*	LOS	95th Q† (feet)
1	I-5 SB Ramps at West Jayne Ave	WB Left	0.01	7.5	A	0.0	0.01	8.0	A	0.0
		WB Through	0.00	0.0	A	0.0	0.00	0.0	A	0.0
		SB	0.12	14.0	B	10.0	0.08	12.0	B	5.0

Table 3.17-3. 2024 Existing Weekday Peak Hour Intersection LOS

No.	Intersection & Movement		AM Peak Hour				PM Peak Hour			
			V/C	Delay*	LOS	95th Q† (feet)	V/C	Delay*	LOS	95th Q† (feet)
2	I-5 NB Ramps at West Jayne Ave	NB	0.25	17.3	C	25.0	0.16	16.4	C	15.0
		EB	0.03	8.4	A	2.5	0.05	7.8	A	5.0
		WB	0.00	8.5	A	0.0	0.01	8.4	A	0.0
		SB	0.11	11.0	B	7.5	0.12	11.6	B	10.0
3	SR-269 at West Jayne Ave	NB	0.15	9.4	A	12.5	0.20	9.2	A	17.5
		EB	0.14	9.9	A	12.5	0.34	10.8	B	37.5
		WB	0.33	10.3	B	35.0	0.10	8.5	A	7.5
		SB	0.34	11.0	B	37.5	0.27	10.0	A	27.5
4	I-5 NB Ramps at SR-269	NB Left	0.05	8.0	A	5.0	0.07	8.0	A	5.0
		NB Through	0.00	0.0	A	0.0	0.00	0.0	A	0.0
		WB	0.10	11.3	B	7.5	0.18	13.2	B	15.0
5	I-5 SB Ramps at SR-269	EB	0.07	10.0	B	5.0	0.09	10.4	B	7.5
		SB Left	0.01	8.0	A	0.0	0.02	8.4	A	2.5
		SB Through	0.00	0.0	A	0.0	0.00	0.0	A	0.0
6	West Jayne Ave at Unnamed Farm Road/Site Access 1	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
8	West Jayne Ave at Subarea C Site Trinity Ave/Site Access 3	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB Left	0.00	7.9	A	0.00	0.00	0.00	A	0.00
		EB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	10.0	B	0.00	0.00	8.9	A	0.00
10	West Jayne Ave at Unnamed Farm Road/Site Access 5	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
13	Lassen Ave (SR-269) at Firestone Ave/Site Access 8	NB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		NB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00

Table 3.17-3. 2024 Existing Weekday Peak Hour Intersection LOS

No.	Intersection & Movement		AM Peak Hour				PM Peak Hour			
			V/C	Delay*	LOS	95th Q† (feet)	V/C	Delay*	LOS	95th Q† (feet)
14	Lassen Ave (SR-269) at Unnamed Farm Road/Site Access 9	NB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
15	Lassen Ave (SR-269) at Unnamed Farm Road/Site Access 10	NB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
16	Lassen Ave (SR-269) at W. Phelps Ave/Site Access 11	NB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		WB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
17	West Jayne Ave at Unnamed Farm Road/Site Access 12	EB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	0.00	A	0.00	0.00	0.00	A	0.00
20	West Jayne Ave at S. Madera Ave/Site Access 15	EB Left	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		EB Through	0.00	0.00	A	0.00	0.00	0.00	A	0.00
		SB	0.00	0.00	A	0.00	0.00	0.00	A	0.00

Notes: EB = eastbound; LOS = Level of Service; NB = northbound; I = Interstate; SB = southbound; SR = State Route; WB = westbound; V/C = Volume to Capacity Ratio
* = Delay in seconds per vehicle
† = Vehicles queues measured in feet

Source: Tetra Tech 2024c, Table 4

As shown in Table 3.17-3, all study area intersections are currently operating below capacity at LOS C or better during the weekday morning and evening commuter peak hours.

3.17.3 Regulatory Setting

3.17.3.1 Federal

No federal regulations pertaining to transportation apply to the Proposed Project.

3.17.3.2 State

California Department of Transportation

Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Fresno County is under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to potential transportation and traffic impacts of the Project:

- California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

3.17.3.3 Local

Fresno County General Plan

The Transportation and Circulation Element of the County General Plan provides the framework for Fresno County decisions concerning the Countywide transportation system, which includes various transportation modes and related facilities. It also provides for coordination with the cities and unincorporated communities within the County, with the Regional Transportation Plan adopted by the Council of Fresno County Governments, and with state and federal agencies that fund and manage transportation facilities within the County. This element of the General Plan sets out goals, policies, and programs related to transportation and circulation. The following transportation-related policies are applicable to the Project:

- *Policy TR-A.4: 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.6: The County shall require dedication of right-of-way or dedication and construction of planned road facilities as a condition of land development and require an analysis of impacts of traffic from all land development projects including impacts from truck traffic. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefit to others through traffic impact fees.*

- *Policy TR-A.10: 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 and Regional Trails Master Plan

The Fresno County Department of Public Works and Planning adopted the Regional Bicycle Recreational Trails Master Plan to establish a framework for future development of the County's bicycle and recreational trail network and makes the County eligible for local, state, and federal funding (Fresno County 2013). The Bicycle and Regional Trails Master Plan provides a comprehensive, long-term planning horizon for development of an extensive regional bikeway and recreational trails network that connects cities and unincorporated areas countywide. The Plan implements various policies contained in the Transportation and Circulation, and Open Space and Conservation Elements of the County's General Plan (Fresno County 2024).

The Plan was amended in 2013 to meet the requirements of the 2006 Measure "C" Transportation Sales Tax Extension, Local Transportation Program by adding recreational trails to the plan. The Plan coordinates the Regional Bikeway System with existing local bikeway plans that tie into a comprehensive bikeway system; coordinates the Fresno County Regional non-motorized transportation system with adjoining counties; and identifies barriers that inhibit safe and convenient non-motorized travel and develop a list of corrective measures to remove the barriers. The Plan contains Policy BP-A.5, which requires development projects adjacent to designated bikeways to provide adequate rights-of-way or easements.

Fresno Council of Governments Regional Transportation Plan

The latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was prepared by the Fresno Council of Governments (FCOG) and was adopted in July 2022. The RTP/SCS is a blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Fresno County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state, and federal agencies. FCOG prepared the 2022 RTP/SCS to include the new requirements to reduce greenhouse gas (GHG) emissions and improve air quality. Additionally, the RTP/SCS establishes a basis on which funding applications are evaluated. Use of any state or federal transportation funds by local governments must conform to the RTP/SCS, the State Implementation Plan for air quality improvements, and the Federal Transportation Improvement Programs (FCOG 2022a).

3.17.4 Impacts Analysis

3.17.4.1 Methodology

The Proposed Project's potential impacts to transportation have been evaluated using a variety of resources, including the Traffic Impact Study (Tetra Tech 2024c) attached as Appendix N. The Traffic Impact Study evaluated the potential impacts associated with routing Project traffic to and from the Project Area via the anticipated haul routes using the Caltrans Vehicle Miles Traveled-Focused

Transportation Impact Study Guide (Caltrans 2020b) and the Fresno County Senate Bill 743 Implementation Regional Guidelines (FCOG 2020). This was accomplished by evaluating the additional Vehicle Miles Traveled (VMT) caused by Project construction, operations, and decommissioning.

Vehicle Miles Traveled

The VMT metric, aligned with GHG emissions, provides a time-dependent value to quantify traffic impacts and is adopted by the California Natural Resources Agency as a key measure under CEQA for assessing transportation impacts and achieving state climate goals. There is no established threshold of significance for VMT for non-office, residential, or retail use projects in Fresno County. As such, the FCOG CEQA VMT Threshold Guide (FCOG 2020 was used, which states that projects that generate or attract fewer than 500 average daily trips may be assumed to have a less than significant transportation impact. Once constructed, the operation and maintenance of the Project is expected to generate negligible traffic on a typical day. Occasionally (once or twice per month), site visits by a small ground crew would be necessary to respond to abnormal operating conditions, conduct routine maintenance and repairs, panel washing and grounds maintenance. However, a qualitative analysis of the construction related VMT is appropriate given that the construction-related trips and traffic volume are temporary and would cease after construction is completed.

The VMT analysis looked at the estimated number of workers on a weekly basis and multiplied by the approximate distance traveled and the number of times per week that distance is traversed (i.e., commutes happen 10 times per week = 2 times per day). The distances were estimated as follows:

- The site is located far from any major urban areas. The nearby communities include Huron, Turk, Avenal, Kettleman City, Coalinga, Stratford, Lemoore, Armona, Hanford. Farther away are the two larger cites of Visalia and Fresno. In an effort to conservatively estimate where workers would come from, approximately 50 percent of workers are expected to come from Visalia, 12 percent from Lemoore, 12 percent from Hanford, and 26 percent from Coalinga.
- Equipment would only need to make the trip once, but the delivery vehicles would make a return trip for each delivery. Equipment and materials were assumed to be available at the nearest large cities, so it was estimated to originate 50 percent from Bakersfield and 50 percent from Fresno.
- The materials that can be acquired locally are also assumed to be split evenly between Bakersfield and Fresno. The remaining materials such as panels and racking systems would come from the Port of Stockton to the Project Area.

Level of Service

As of July 1, 2020, LOS is no longer an acceptable metric to determine the significance of transportation impacts under CEQA. However, LOS is still commonly used as a qualitative description of roadway segments and intersection operations and is based on the capacity and volume of traffic using a roadway segment or intersection. The LOS at the unsignalized study intersections was calculated using the Highway Capacity Manual (HCM) Methodology. The HCM analysis methodology describes the operation of a roadway or intersection using a range of LOS from LOS A (minimal delay) to LOS F (severely

congested conditions), based on the corresponding control delay experienced per vehicle for unsignalized intersections. Table 3.17-4 describes level of service criteria under the HCM methodology.

Table 3.17-4. Levels of Service Criteria

Levels of Service	Unsignalized Intersection Control Delay (seconds)	Roadway Segment Density (vehicles/mile/lane)
A	<10.0	≤2.0
B	>10.0 to <15.0	>2.0 to 4.0
C	>15.0 to <25.0	>4.0 to 8.0
D	>25.0 to <35.0	>8.0 to 12.0
E	>35.0 to <50.0	>12.0
F	<50.0	Demand exceeds capacity

Note: Roadway segment Level of Service calculated for roadway segments with posted speed limit > 50 miles per hour

Source: Transportation Research Board 2016, 2022

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, transportation impacts are considered significant if implementation of the Proposed Project would result in:

- conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- result in inadequate emergency access

3.17.4.2 Impact Discussion

Threshold 1: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Roadway Facilities

Trip Distribution

It is anticipated that the construction workforce would commute daily from nearby communities and report to the designated construction staging yards before starting work each day, with parking provided onsite. It is assumed the construction workforce would be drawn from within an approximately 45-minute drive to the site. Non-local construction staff are anticipated to stay in hotels in nearby communities like Coalinga, Lemoore, Hanford, or other local communities.

It was assumed that all trips associated with the Project's peak construction activities would be distributed among the three Project subareas (A through C) proportionally. Project construction worker trip distribution patterns were estimated using U.S. Census population data and routes determined based on existing travel times during peak commuting periods.

Project Trip Generation

The Project would consist of three phases: construction, operations and maintenance, and decommissioning. The highest volume of Project-related trips would occur during the peak construction phase; therefore, to provide a conservative estimate of Project Impacts, trip generation for the peak construction phase workforce levels was used for this assessment based on construction operations information provided by the County.

Construction

The primary activity generating the most trips would be construction of the Project, which is expected to include site preparation, panel installation, inspections, and equipment deliveries. Project construction is estimated to last approximately 9 months.

Trip generation data for a photovoltaic solar facility is not available in the Institute of Transportation Engineers *Trip Generation Manual*; however, detailed traffic volumes are known for the Project Area from planning and scheduling of the construction activities as well as San Luis West Solar, LLC's (Applicant) experience with construction and operation of similar solar facilities. Table 3.17-5 provides a summary of construction trip generation estimates by phase. The values shown are conservative and may be higher than actual daily traffic.

Table 3.17-5. Trip Generation Estimates – By Phase

Construction Phase*	Duration (weeks)	Construction Workforce	Average Daily Worker Trips†	Average Daily Vendor Deliveries	Average Daily Haul Deliveries	Average Daily Heavy Vehicle Trips‡
Site Preparation and Grading	8	40	74	25	30	110
Solar Arrays and Inverters Installation	12	200	370	25	12	74
Electrical Work	8	60	112	4	2	12
Substation Installation	8	60	112	20	20	80
Transmission Interconnection	4	20	38	4	20	48

Notes: * = Construction phasing, duration, and workforce levels provided by San Luis Solar, LLC (Applicant).
† = Assumes one inbound and one outbound trip per vehicle per day. Accounts for 15% of workforce carpooling with a Vehicle Occupancy Rate of 2.0.
‡ = Assumes one inbound and one outbound trip per heavy vehicle per day.

Source: Tetra Tech 2024c

The maximum (peak) number of construction workforce levels onsite at any one time would be 200 individuals. For a conservative analysis the traffic report prepared for the Project utilized a daily quantity of 300 onsite construction workers as the peak number of construction workers onsite. The final two construction phases, Substation Installation and Transmission Interconnection, would experience significantly fewer construction workforce levels (60 and 20 workers, respectively).

Construction will mainly occur during daylight hours, Monday through Friday from 7:00 a.m. to 6:00 p.m., with additional hours or days possible to meet the schedule. Any construction outside normal hours will be coordinated with the appropriate agencies and conform to Fresno County Noise regulations.

Table 3.17-6 provides a summary of the temporary increase in traffic associated with the Project's peak construction phase, which is anticipated to occur over an approximate 3-month period during the Project's 9-month construction period.

Table 3.17-6. Project Peak Construction Trip Generation Estimates

Vehicle Type	Daily Quantity	Daily Trips*	Morning Peak Hour		Evening Peak Hour	
			Inbound	Outbound	Inbound	Outbound
Workers	300	556	278	0	0	278
Vendor Trucks	54	108	16	16	16	16
Haul Trucks	44	88	13	13	13	13

Table 3.17-6. Project Peak Construction Trip Generation Estimates						
Vehicle Type	Daily Quantity	Daily Trips*	Morning Peak Hour		Evening Peak Hour	
			Inbound	Outbound	Inbound	Outbound
Total Trips		752	307	29	29	307

Note: * A carpool factor of 15 percent was applied to worker trips.

Source: Tetra Tech 2024c

During peak construction, it is anticipated that up to 98 offsite delivery trucks (e.g., trucks delivering materials from offsite locations), would be needed. Approximately 30 percent of delivery truck traffic to and from the Project Area is anticipated to occur during the weekday morning and evening peak hours.

Although construction is expected to have minimal impact to the study area roadways and intersections, Mitigation Measure TRANS-1 would implement a Construction Traffic Management Plan (CTMP) to minimize potential Project-related traffic impacts along West Jayne Avenue and SR-269.

Operations and Maintenance

Once constructed, the Project will be operated remotely, seven days per week, year-round. Remote operators will continuously monitor plant output, voltage, and local weather conditions, receiving real-time alerts for any abnormal conditions and dispatching technicians as needed. Onsite O&M activities will include responding to abnormal conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance. A conservative estimate of trip generation for operations would assume four workers would visit the site from the City of Fresno every other week, a maximum of 26 times per year during operations. Trip generation during the Project's O&M lifecycle (minimum of 35 years) is considerably smaller than the construction related trip generation.

Decommissioning

Decommissioning occurs at the end of a facility's useful life. This could be well beyond the initial operational period, as primary Project components can be upgraded and replaced as needed to extend the operational lifespan of the facility by several decades. Nonetheless, at the point when the Project reaches the conclusion of its useful life, decommissioning will take place in a similar fashion to construction, but simply in reverse. Because of this, estimation of VMT was assumed to be the same as that generated by construction.

Level of Service Analysis

LOS is no longer an acceptable metric to analyze transportation impacts under CEQA. However, the Fresno County General Plan Transportation and Circulation Element Policy TR-A.3 sets LOS thresholds. Under the County's General Plan, rural county roadways must maintain a LOS D or better.

Potential impacts to traffic and circulation have been evaluated for each of the following conditions:

- 2024 Existing Conditions

- 2024 Existing Plus Project Conditions
- 2025 Cumulative Conditions
- 2025 Cumulative Plus Project

2024 Existing Conditions

Under existing traffic conditions, all study area roadway segments are currently operating well below capacity at LOS A operations (see Table 3.17-2). All study area intersections are currently operating below capacity at LOS C or better during the weekday morning and evening commuter peak hours (see Table 3.17-3).

2024 Existing Plus Project Conditions

2024 Existing Plus Project Road Segment Operations

A peak hour roadway segment LOS analysis was conducted for study area roadways to evaluate the 2024 Existing Plus Project. Based on the appropriate significance criteria, study area roadway segments are anticipated to operate well below capacity at LOS B or better operations, which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

2024 Existing Plus Project Intersection Operations

An intersection operations analysis was conducted to evaluate the 2024 Existing Plus Project weekday morning and evening peak hour conditions. The study area intersections are anticipated to operate below capacity at LOS C or better for the 2024 Existing Plus Project weekday commuter peak hour conditions which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

2025 Cumulative Conditions

A list of cumulative projects within a 6-mile radius of the Project Area was obtained from the Fresno County Planning and Natural Resources Database. The Key Energy Storage Project was identified as a project that would likely add traffic to the study area roadway segments and intersections in the design year 2025.

2025 Cumulative (Without Project) Roadway Segment Operations

A peak hour roadway segment LOS analysis was conducted for the study area to evaluate the 2025 Cumulative (Without Project) conditions. The study area roadway segments are anticipated to operate well below capacity at LOS A.

2025 Cumulative (Without Project) Intersection Operations

An intersection operations analysis was conducted for the study area to evaluate 2025 Cumulative (Without Project) weekday morning and evening peak hour conditions. The study area intersections are anticipated to operate below capacity at LOS C or better during both of the weekday commuter peak hours.

2025 Cumulative Plus Project

2025 Cumulative Plus Project Roadway Segment Operations

A peak hour roadway segment LOS analysis was conducted for the study area to evaluate the 2025 Cumulative Plus Project conditions. The study area roadway segments are anticipated to operate at well below capacity at LOS B or better under 2025 Cumulative Plus Project conditions, which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

2025 Cumulative Plus Project Intersection Operations

An intersection operations analysis was conducted for the study area to evaluate 2025 Cumulative Plus Project weekday morning and evening peak hour conditions. The study area intersections are anticipated to operate below capacity at LOS C or better both peak hours which falls within the Fresno County desired LOS criteria for rural areas (LOS D or better operations).

The addition of Proposed Project traffic to existing, existing plus project conditions, cumulative conditions, and cumulative plus project conditions would not result in any of the study roadway segments or intersections to operate at an unacceptable LOS level. All roadway segments or intersections would operate at LOS D or better. As such, the Proposed Project is anticipated to be consistent with the Fresno County General Plan Transportation and Circulation Element.

Transit Services

Public transportation in the Project rea is provided by the FCRTA. Coalinga Transit travels on SR-269 through the area via West Jayne Avenue and SR-269. No transit stops are located within the Project Area. No impact would occur.

Bicycle and Pedestrian Facilities

There are currently no dedicated pedestrian or bicycle facilities in the immediate vicinity of the Project Area or along the surrounding roadways or highways. No impact would occur.

Threshold 2: Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3, subdivision (b) details the use of VMT to assess the significance of transportation impacts. As detailed in CEQA Guidelines section 15064.3, subdivision (c), a lead agency may elect to be governed by the provisions of this section immediately.

This references the VMT metric as used to analyze transportation impacts. VMT was quantified in the Traffic Impact Study conducted for the Proposed Project (see Appendix N). Because this Project has a small amount of VMT being generated, largely only during construction, it is anticipated to have a less than significant impact. The results of the VMT analysis for construction, operations, and decommissioning are discussed below.

Construction

The Project would represent an increase in VMT during the nine-month construction period compared with the existing agricultural cultivation uses at the Project location. Once construction is completed, no permanent O&M staff would be located in the Project Area.

Table 3.17-7 provides the results of the VMT analysis for the construction portion of the Project. The full analysis with VMT per worker commute origin and heavy vehicle delivery origin is shown in the Traffic Impact Study in Appendix N.

Table 3.17-7. Construction Vehicle Miles Traveled

VMT Type	VMT per Construction Phase					Total VMT
	Site Preparation and Grading	Solar Arrays and Inverters Installation	Electrical Work	Substation Installation	Transmission Interconnection	
Total Passenger Vehicle	67,336	505,018	101,913	101,913	17,289	**793,469**
Total Heavy Vehicle	454,960	459,096	49,632	330,880	99,264	**1,393,832**
Grand Total Construction	522,296	964,114	151,545	432,793	116,553	**2,187,301**

Note: VMT = Vehicle Miles Travelled

Source: Tetra Tech 2024c

Operations

Operational VMT is considerably smaller than the construction VMT. As mentioned previously, on a typical day, no workers would be visiting the site. A conservative estimate of the VMT for operations would assume four workers would visit the site from the City of Fresno every other week, a maximum of 11,024 VMT per year during operations. This rate would be typical throughout the operational life of the Project. There would likely be occasional larger repair or maintenance operations such as panel washing, but these would be infrequent and of short duration. Given the short duration and infrequency of the repairs, these occurrences would add so few VMT that it is not a meaningful inclusion in the analysis. Over the estimated 35-year period the total VMT for operations is likely less than 385,840 miles. Given that the daily Project generated trips would be fewer than the 500 average daily trips FCOG threshold. Impacts would be less than significant.

Decommissioning

Decommissioning would generate trips and VMTs very similar to that of construction. For that reason, additional quantitative analysis for decommissioning was not included for this analysis.

Furthermore, the significance of these additional VMT were evaluated based on the three guidance criteria from the State of California Office of Planning and Research (OPR) December 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (CEQA 2018) including "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

There is no established threshold of significance for VMT for non-office, residential, or retail use projects in Fresno County. Since no quantitative threshold has been identified, the significance of the additional miles traveled due to the Project will be evaluated based on the three guidance criteria from Appendix G of the CEQA Guidelines and also compared to the FCOG's RTP/SCS goals.

Reduction of Greenhouse Gas Emissions

The Project is a solar and BESS facility and the chief aim of constructing solar facilities is the reduction of dependence on GHG-emitting fossil fuel energy sources. The Project would provide clean renewable energy for approximately 35 years once completed. Additionally, the Applicant prepared an Air Quality and Greenhouse Gas Technical Report for Fresno County, which concluded a *less than significant impact* for both construction and operations emissions (Tetra Tech 2025c). This report identified a quantitative threshold of significance for GHG emissions. The analysis included in that report accounted for construction traffic emissions to determine the total emissions for the Project. Using this definitive quantitative metric yielded a *less than significant impact*. Based on this conclusion, a threshold value for VMT would likely be much higher than the Project-generated VMT. This assertion is in line with the fact that the guidance for conducting VMT analysis originated with GHG emissions reduction regulations and goals and the guidance states "OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so" (CEQA 2018).

Development of Multimodal Transportation Networks

This criterion is not relevant to the Proposed Project.

Diversity of Land Use

According to CEQA (2018), "State law concerning the development of multimodal transportation networks and diversity of land uses requires planning for and prioritizing increases in complete streets and infill development but does not mandate a particular depth of implementation that could translate into a particular threshold of significance."

The Project would diversify land use by changing the current use from minimally developed cropland and an orchard to renewable energy production. While the Project would increase the VMT from minimally developed to developed conditions, nearly all of the VMT are added during a relatively short construction time window. The expected facility maintenance would generate infrequent and light traffic during operations, and it is anticipated that eventually maintenance visits would be reduced to once a month or less and not impact peak hour traffic. At the end of the Project's life, decommissioning would generate trips and miles traveled very similar to construction. Development of the Project would therefore support California's statutory energy goals—reduction of GHGs through development of a source of solar energy and a diversity of land uses.

The development of the Project would support the goals of CEQA and the FCOG with regard to diversifying land use and reducing greenhouse gas emissions. The majority of VMT generated by the Project will occur over a short period of time during construction, after which the Project will generate renewable energy for approximately 35 years and support a sustainable future for Fresno County while generating an extremely low VMT per year. As such, the Project impacts will be less than significant and no mitigation is recommended.

Threshold 3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No geometric design features will be constructed or modified as part of this Project. The roadways utilized by the Project have been deemed adequate for the conveyance of materials, equipment, and workers; therefore, the Project impacts would be less than significant.

Threshold 4: Would the project result in inadequate emergency access?

The Proposed Project is located in a rural area with the primary access roads (West Jayne Avenue and State Route 269) allowing adequate egress and ingress to the site in the event of an emergency. Additionally, as part of the Proposed Project, existing interior access roads may be improved with the addition of an aggregate base or other native material with a soil stabilization material, which would be designed to meet applicable operations and maintenance and public safety access requirements. The Project would not hinder emergency access to the Project Area or to other roadways in or around the Project vicinity; therefore, the impact would be less than significant.

Although the Project is expected to have minimal impact to study area roadways and intersections, mitigation measures have been considered to improve the safety of the construction workforce and all other road users, as detailed below and per the Traffic Impact Analysis Report prepared for the Project.

3.17.5 Mitigation Measures

TRANS-1: **Construction Traffic Management Plan.** Prior to the issuance of a construction permit by the County, a CTMP shall be prepared by the Project Proponent and submitted to the County for review/approval. The CTMP would minimize potential Project-related traffic impacts. West Jayne Avenue and SR-269 are high-speed roadways that would serve as the primary access to the Project Area. If requested by Caltrans or Fresno County Public Works staff, temporary construction zone speed restrictions may be implemented along West Jayne Avenue and SR-269 to encourage motorists to slow down through the study area. The CTMP may include variable message boards and additional signage along West Jayne Avenue and SR-269 alerting motorists of the increased turning activity in the vicinity of the site driveways and access roads and to watch for slow-moving traffic. The CTMP shall also include Travel Demand Management measures to encourage non-single occupancy vehicle trips and minimize reliance on single-occupant vehicles and reduce single occupancy vehicle trips to and from the Project Area.

3.17.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.18 Tribal Cultural Resources

3.18.1 Introduction

This section provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the Proposed Project. Impacts to tribal cultural resources are considered significant if the Proposed Project would cause a substantial adverse change in the significance of a tribal cultural resource that is (1) listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in Public Resources Code (PRC) section 5020.1 (k); or (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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The analysis is based on results of the Native American consultation conducted by Fresno County (County) for purposes of compliance with CEQA requirements prompted by Assembly Bill (AB) 52) and the following technical document:

- Negative Phase I Archaeological Survey Report, San Luis West Solar Project (Tetra Tech 2025g; Appendix J).

3.18.2 Environmental Setting

The Project Area is currently a cultivated field within the San Joaquin Valley. The San Joaquin Valley is part of the larger Central Valley agricultural region of California. To the west of the Project is the Coastal Range, and to the east of the valley is the Sierra Nevada Mountain Range.

The Central Valley is a forearc basin field with several thousand feet of sedimentary deposits that overlay Sierran basement rocks. The Project Area deposits consist of Quaternary (Late Holocene) Great Valley alluvium fan deposits of unconsolidated cobbles, gravel, and sand. The predominant soil series of the Project Area consists of Westhaven loam, Excelsior sandy loam, and sandy substrates to depths of 72 inches.

The elevational range of the Project Area is approximately 325 to 340 feet above mean sea level and is located within the San Joaquin River and Kings River watershed. The Project lies approximately 7 to 8 miles north-northwest of the Tulare Lake basin region and associated marshland and shoughs. The lakebed is a sink that was an extant lake in prehistory but is now dry due to runoff being diverted historically for agriculture.

3.18.3 Cultural Context

The cultural chronology of human occupation in the Central Valley is characterized by changing settlement and subsistence strategies in response to environmental conditions and available resources. Historically, the Project region population increased through the development of infrastructure (e.g., railroads) and economic resources (e.g., agriculture and ranching).

3.18.3.1 Pre-Contact Overview

There is no single cultural historical framework that encompasses the entire precontact record of the Central Valley. The generalized cultural sequence includes the Paleo-Indian Period (13,500–10,500 calibrated years before the present [cal B.P.]), Lower Archaic Period (10,500–7,500 cal B.P.), Middle Archaic Period (7,500–2,500 cal B.P.), Upper Archaic Period (2,500 cal B.P.–calibrated anno domini [cal A.D.] 1000), and Emergent Period (cal A.D. 1000–Historic).

Archaic Period

The Lower Archaic Period is characterized by isolated finds of stemmed points (similar to Borax Lake, Lake Mojave, Siler Lake, and Pinto wide stem types), stone crescents, and other distinctive, formalized, flaked stone artifacts (Rosenthal et al. 2007).

The Middle Archaic climate was characterized by warmer and drier conditions facilitating the reduction or complete desiccation of Central Valley lakes. This period is categorized by projectile points such as notched, stemmed, thick-leaf, and narrow concave base darts, groundstone, pottery, twined basketry, basketry awls, and polished stone plummets. At this time, the classic Windmiller Pattern burial mounds occur. This pattern represents riverine adaptions that were permanent, year-round, habitation sites.

The Upper Archaic climate was cooler and wetter. Populations were characterized by geographically complex sociopolitical organizations as evident from archaeological burial data (e.g., contrasting burial postures), artifact styles, and other items of material culture. Specialized technologies appeared during the Upper Archaic Period such as bone tools and implements and the production of saucer and saddle-shaped shell beads (*Olivella*) and ornaments (*Haliotis*), and ceremonial obsidian blades. This period was also marked by mortar and pestle use. Artifact assemblages from the period includes temporally diagnostic forms *Olivella* and *Haliotis*, charm stones (often found cached), cobble mortars, chisel ended pestles, and dart points. Other diagnostic artifacts include a wide array of bone tools including awls, fish spears, saws, and flake tools.

During the transition from the Upper Archaic Period to the Emergent Period, the Central Valley experienced drier conditions resulting in resource depression of valley and lowland resources. Native groups abandoned the valley floor and relocated to upland resource areas. As the climate improved, people expanded downslope again to the valley floor.

Emergent Period

The Emergent Period is characterized by the appearance of bow-and-arrow technology, the rise of wealth-linked social status, the specialization of bead manufacturing, and increased social complexity as indicated by increased variation in burial types and furnishings. This period is also marked by the intensification of plant resources, and the use of the mortar and pestle. Artifact assemblages are characterized by small corner-notched and side-notched projectile points, *Olivella* lipped and clam disc beads and bead drills, magnesite cylinders, hopper mortars, pottery, clay balls, and village sites with house pits (Rosenthal et al. 2007).

3.18.3.2 Ethnohistory

The Project Area is within the ancestral lands of the Southern Valley Yokuts people, who spoke a branch of the Penutian (Yok-Utian) language family. The Yok-Utian language is divided into only two distinct subbranches: the Miwok-Costanoan and Yokuts.

The Yokuts fall into three geographical divisions, the Foothill Yokuts, Southern Valley Yokuts, and Northern Valley Yokuts. The Southern Valley Yokuts aboriginal lands extended within the upper end of the San Joaquin Valley, from the lower Kings River to the Tehachapi Mountains and encompassed Tulare, Buena Vista, and Kern lakes and their connecting sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern rivers. The Southern Valley Yokuts generally established villages on low, natural rises along lakes, major water courses, or tributaries. These water sources supported a large variety and abundance of natural floral, aquatic, and faunal resources.

The Tulare Lake basin was inhabited by three Yokuts tribes: the Tachi, the Wowol, and the Chunut. Tribal boundaries were fixed, but friendly relations prevailed between local groups, and the Tulare Lake tribes shared their abundant resources with outsiders. The current Project Area is within the ancestral lands of the Tachi Tribe.

The Yokuts practiced a mixed economy of resource procurement and focused on fishing, hunting, fowling, and collecting freshwater shellfish, as well as plant resources such as roots and seeds. The Yokuts were proficient fishers, implementing various strategies, such as nets, hooks, diving with nets, conical basketry traps, spears, two-prong harpoons, bow and arrow (albeit to a lesser extent), and the use of turkey mullein (*Eremocarpus setigerus*), a plant toxin that would stun fish and bring them to the surface. Seeds, roots, and grasses, such as tule, nutty roots, grassnuts, clover, fiddle-neck, and alfilaria, provided a large portion of the diet.

The family units of the Southern Valley Yokuts formed groups or triblets, averaging between 300 to 350 members living in villages. Residential areas were typically located upon raised elevations near resource and water sources, such as Tulare Lake Basin, creeks, and river drainages. Villages were occupied most of the year until late spring, when families would venture out for several months to collect seed-plant and other resources. The Southern Valley Yokuts were immensely involved in trading resources with neighboring tribes, trading items such as fish, seeds, baskets, and hides in exchange for other goods (e.g., obsidian, salt). Historic contact between the Southern Valley Yokuts and European immigrants took a devastating toll on the indigenous people, beginning with the Spanish in the 1770s. Military raids, disease, epidemics, and forced servitude claimed many indigenous lives during the Spanish, Mexican, and American periods.

In 1921, the Santa Rosa Rancheria was established on 40 acres of farmland in Lemoore, California. By 1980, the Santa Rosa Rancheria had 200 Tachi-Yokut tribal members and 170 acres of land. The Tachi-Yokut tribe is a state- and federally recognized tribe. Today, the Rancheria has grown to include over 1,800 acres, has an active tribal government and programs.

3.18.4 Regulatory Setting

3.18.4.1 Native American Correspondence and AB 52 Consultation

The Native American Heritage Commission (NAHC) maintains a confidential Sacred Lands File (SLF), which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on November 4, 2020 to request a search of the SLF. The NAHC responded to the request in a letter dated November 20, 2020 indicating that the results were negative. The SLF request and response from the NAHC are included as Appendix J.

Pursuant to AB52, formal government-to-government consultation is required by the lead CEQA agency. Coordination and consultation with Native American tribes may provide additional tribal ecological knowledge regarding tribal cultural resources (PRC Section 21074 [a][1][A]-[B]).

The NAHC list includes the following tribes:

- Big Sandy Rancheria of Western Mono Indians (Federally Recognized)
- Chicken Ranch Rancheria of Me-Wuk Indians
- Cold Springs Rancheria of Mono Indians (Federally Recognized)
- Dumna Wo-Wah Tribal Government
- Dunlap Band of Mono Indians
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- North Fork Nomo Tribe
- Picayune Rancheria of Chukchansi Indians
- Kings River Choinumni Farm Tribe
- Santa Rosa Rancheria Tachi Yokut Tribe
- Table Mountain Rancheria (Federally Recognized)
- Traditional Choinumni Tribe
- Wuksache Indian Tribe/Eshom Valley Band

3.18.4.2 Federal

There are no applicable federal regulations for this issue area.

3.18.4.3 State

Native American Heritage Commission

PRC Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerald "Jerry" Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to CEQA Guidelines Appendix G, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded 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 (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process,

or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an Environmental Impact Report or adopt a Mitigated Negative Declaration (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process, shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

3.18.4.4 Local

Fresno County General Plan

The County's General Plan Open Space and Conservation Element (OS), Historical, Cultural, and Geological Resources sections contains several objectives and policies relevant to the preservation of cultural resources through development review, acquisition, encouragement of easements, coordination with other agencies and groups, and other methods (Fresno County 2024). The applicable goals and policies include the following:

- *Goal OS-J:* To identify, protect, and enhance Fresno County's important historical, archeological, paleontological, geological, and cultural sites and their contributing environment, and promote and encourage preservation, restoration, and rehabilitation of Fresno County's historically significant resources in order to promote historical awareness, community identify, and to recognize the county's valued assets that have contributed to past county events, trends, styles of architecture, and economy.
    - *Policy 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.

3.18.5 Impact Analysis

3.18.5.1 Methodology

The Proposed Project's potential impacts to tribal cultural resources have been evaluated using a variety of resources, including a record search, pedestrian survey, and SLF search conducted by the NAHC (also see Section 4.5, Cultural Resources, of this Draft EIR). Further information regarding the presence of tribal cultural resources can be acquired upon inquiry with the relevant Native American groups and individuals on the County's Master List (see Appendix J for list), in accordance with AB 52 via the lead CEQA agency and government-to-government consultation. On January 3, 2025, the County sent Project notification

letters to the following California Native American tribes during the EIR process pursuant to 21080.3.1(d) of the Public Resources Code:

- Big Sandy Rancheria of Western Mono Indians (Federally Recognized)
- Chicken Ranch Rancheria of Me-Wuk Indians
- Cold Springs Rancheria of Mono Indians
- Dumna Wo-Wah Tribal Government
- Dunlap Band of Mono Indians
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- North Fork Nomo Tribe
- Picayune Rancheria of Chukchansi Indians
- Kings River Choinumni Farm Tribe
- Santa Rosa Rancheria Tachi Yokut Tribe
- Table Mountain Rancheria (Federally Recognized)
- Traditional Choinumni Tribe
- Wuksache Indian Tribe/Eshom Valley Band

No responses were received from any of the tribes notified under AB 52 for this Project.

3.18.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, tribal cultural resources impacts are considered significant if implementation of the Proposed Project would result in:

- A substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
    - a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.18.5.3 Impact Discussion

Threshold 1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)?

or

Threshold 2: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources 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 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1? In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No tribal cultural resources were identified through the record search, pedestrian survey, and SLF search conducted by the NAHC, nor as part of the County's government-to-government notification and consultation efforts with interested Native American groups conducted pursuant to AB 52. Given that no tribal cultural resources have been identified within or immediately adjacent to the Project Area, the Project is not expected to cause a substantial adverse change in the significance of a tribal cultural resource. However, in the event that buried significant tribal cultural resources are encountered during Project construction, significant impacts could occur. Implementation of Mitigation Measures TCR-1 through TCR-3 would ensure that impacts would be less than significant.

3.18.6 Mitigation Measures

TCR-1: **Tribal Cultural Resource Worker Education/Training.** Prior to Project construction-related, ground-disturbing activities (e.g., vegetation removal, excavation, trenching, and grading), the Project Applicant shall retain a qualified representative from a local Native American tribe to conduct a tribal cultural resource worker education awareness program for Project construction personnel. During construction, the local Native American tribal representative(s) shall provide the training to all new construction personnel. The cultural resource training shall include:

- an overview of applicable laws and penalties pertaining to disturbing tribal cultural resources;

- a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area;
- types of tribal cultural resources found in the area,
- instruction that Project workers shall halt construction if a tribal cultural resource is inadvertently discovered during construction; and
- procedures to follow if an inadvertent discovery is encountered (Inadvertent Discovery Plan discussed below), including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs).

TCR-2: **Tribal Cultural Resource Monitoring.** Prior to ground-disturbing construction activities, the Project Applicant shall retain a Secretary of the Interior-qualified Project archaeologist to prepare and implement a Cultural Resource Monitoring Plan (Plan or Monitoring Plan) that shall outline the procedures for monitoring. The qualified Project archaeologist shall also coordinate and schedule Project archaeological and local Native American (as applicable) monitors during Project construction. The Plan shall be submitted to the County for review and approval.

The Plan shall include (but not be limited to) the following:

- identification of qualified monitors;
- monitor responsibility and daily reporting;
- schedules;
- applicable laws;
- inadvertent discovery procedures (see TCR-3 below);
- monitoring frequency; and
- final reporting at the completion of the Project.

The report shall be submitted to the County and the Southern SSJVIC.

TCR-3: **Inadvertent Discovery of Archaeological or Tribal Cultural Resources During Construction.** A Secretary of the Interior-qualified Project archaeologist shall prepare an Inadvertent Discovery Plan as part of the Monitoring Plan for the Project. The local Native American tribal representative(s) shall be invited to participate in drafting any tribal cultural resources protocols for the Inadvertent Discovery Plan, if requested.

The Inadvertent Discovery Plan shall provide protocols and notification procedures in the event of an inadvertent discovery. If subsurface archaeological or tribal cultural resources are discovered during Project construction (e.g., ground-disturbing activities such as vegetation removal, excavation, trenching, and grading), all ground-disturbing activities within 50 feet of the find shall cease and the qualified Project archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the qualified Project archaeologist shall determine appropriate avoidance measures or other appropriate mitigation in consultation with the implementing

agencies and any local consulting Native American groups expressing interest. Under CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified Project archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local consulting Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, the site shall be treated in accordance with the provisions of Section 21083.2

3.18.7 Level of Significance After Mitigation

Project-related impacts associated with tribal cultural resources would be less than significant with implementation of the aforementioned mitigation measures.

3.19 Utilities and Service Systems

3.19.1 Introduction

This section describes the affected environment and regulatory setting of the Project relating to demand for operational utilities (i.e., water supply, stormwater, electricity, natural gas, telecommunications, and solid waste disposal). This section describes existing infrastructure and levels of service and evaluates whether any improvements would be required to accommodate the Project. Impacts to utilities and service systems resources are considered significant if the Proposed Project would (1) exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; (2) require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; (3) require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; (4) have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed; (5) result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; (6) be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or (7) comply with federal, state, and local statutes and regulations related to solid waste.

The analysis is based on the following technical document included as an appendix:

- Water Supply Assessment, San Luis West Solar Project (Tetra Tech 2025i; Appendix L)

3.19.2 Environmental Setting

The Project Area is includes seven parcels totaling approximately 1,400 acres of land. All areas of permanent and temporary impacts is comprised of approximately 1,100 acres located in the southern portion of unincorporated Fresno County, west of the California Aqueduct and east of Interstate 5, and approximately 3 miles south of the City of Huron.

3.19.2.1 Water Supply

The Project Area is rural and unincorporated, and no public water utility provides potable and treated drinking water to this location. The Project Area is located in the Tulare Lake Hydrologic Region. The most significant artificial water supply conveyance through the Tulare Lake Hydrologic Region is the California Aqueduct, which runs from north to south, moving surface water from the California State Water Project (SWP). These waters are distributed to various water agencies and districts throughout Southern California, including the City of Coalinga, the City of Huron, Pleasant Valley Water District (PVWD), and Westlands Water District (WWD). The Project Area is located within the WWD service area. Additionally, San Luis West Solar, LLC has obtained ownership of two wells located within Subarea A of the Project Area. The water from the wells is from the Westside Subbasin and is expected to provide adequate water supply for all phases of the Project. The wells would also supply the existing onsite pond, which has

10 acre-feet (AF) or capacity of 3,250,000 gallons. The pond is currently used for irrigation water storage, which would cease and be solely used for construction and operation of the Project. Water supply and water resource evaluations are discussed in detail within the Water Supply Assessment (WSA) prepared for the Proposed Project.

3.19.2.2 Groundwater Supply

The Project Area is within the Westside Subbasin of the San Joaquin Valley Groundwater Basin and the Tulare Lake Hydrologic Region. This hydrologic region is an internally drained watershed with surface water inflow from the Kaweah, Kern, Kings, and Tule rivers (all flowing west out of the Sierra Nevada Mountains). The Westside Subbasin is bordered on the west by the Coast Ranges, comprised of Tertiary marine sediments and sedimentary rocks, with little to no groundwater resources. Recharge to the subbasin comes from intermittent stream seepage from the Coast Range into the western valley edges, from deep seepage of irrigation water over the basin itself, and the inter-basin groundwater flow from the eastern edge of the subbasin. Average annual precipitation varies across the subbasin from 7 inches in the south to 9 inches in the north (California Department of Water Resources [DWR] 2006).

The capacity of the Westside Subbasin to hold groundwater is very large but has decreased over time due to subsidence related to groundwater pumping. In 2006, DWR estimated the storage capacity of the shallow zone to be 36,500,000 AF and the deep zone at 65,000,000 AF. However, the available groundwater in the subbasin was estimated at 6,000,000 AF using an average water depth of 111 feet (a value from 1984) and a bottom of the useable groundwater at 1,000 feet.

3.19.2.3 Wastewater

According to the Fresno County General Plan Environmental Impact Report (EIR), rural residential development that is not served by centralized wastewater systems rely on individual septic systems for wastewater treatment and disposal. Septic systems are regulated by the Fresno County Planning & Resource Management Department, which enforces standards and criteria for onsite systems. There are no known septic systems within the Project Area boundaries as the Project Area is currently undeveloped.

3.19.2.4 Stormwater Drainage

As described in Section 4.10, the Project Area is very flat with a gentle (less than 0.5 percent) slope generally to the east, with elevations ranging from approximately 410 feet above sea level (asl) on the western side and approximately 330 feet asl near the California Aqueduct on the eastern side. No natural drainage course traverses the Project Area and the nearest established channel, Los Gatos Creek, is approximately 1.1 miles northwest of the Project Area. Los Gatos Creek drains a small area of the Coast Ranges, which flows east through Coalinga before turning northeast and heading into the San Joaquin Valley.

3.19.2.5 Solid Waste

Solid waste generally refers to garbage, refuse, sludge, and other disposed solid materials that come from residential, industrial, and commercial activities. Construction, demolition, and inert wastes are also classified as solid waste. Those wastes include nonhazardous building materials such as asphalt, concrete, brick, drywall, fencing, metal, packing materials, pallets, pipe, and wood. The general waste classifications used for California waste management units, facilities, and disposal sites are delineated below. Nonhazardous solid waste consists of organic and nonorganic solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste, provided that such wastes do not contain hazardous materials or soluble pollutants in concentrations that would surpass applicable water quality objectives or cause a degradation of waters of the State.

California State law regulates the types of waste that can be disposed of at the different classes of landfills. Class I landfills may accept hazardous and nonhazardous wastes. Class II landfills may accept designated and nonhazardous wastes, and Class III landfills may accept nonhazardous wastes.

Fresno County is responsible for meeting the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939). AB 939 required cities and counties to reduce the amount of solid waste being sent to landfills by 50 percent by January 1, 2000. It also required cities and counties to prepare solid waste planning documents. These documents include the Source Reduction and Recycling Element, the Hazardous Waste Element, and the Nondisposal Facility Element. All three of these documents, as well as the Integrated Waste Management Plan, approved February 1998 by the California Integrated Waste Management Board, have been approved for Fresno County. The Fresno County Construction & Demolition Waste Management Plan is the long-range planning document for landfill facilities.

Construction and demolition (C&D) waste is heavy, inert material, which can generate significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more complicated for counties and cities to reduce the tonnage of disposed waste. Due to this difficulty, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that create C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction Project, which grants maximum use of the deconstructed materials for recycling in other construction Projects and sends a minimum amount of the deconstruction material to landfills.

Approved on October 6, 2011, AB 341 promotes recycling and diversion of solid waste from landfills by requiring businesses to accomplish recycling activities and/or participate in recycling programs. The Resources and Parks Division of the Fresno County Department of Public Works and Planning administers or sponsors recycling programs such as the Recycling Market Development Zone Program, which contribute toward meeting State-mandated solid waste diversion goals (Fresno County 2024).

3.19.2.6 Landfills

The Fresno County Department of Public Works and Planning operates one landfill and one small transfer station for solid waste disposal. The American Avenue Disposal Site (Class II, III) is in the city of Kerman, approximately 33.4 miles from the Project Area, and Shaver Lake Transfer Station (does not have Landfill Class) located in the City of Shaver Lake approximately 75.8 miles from the Project Area. Collection throughout the County is divided into 13 service areas, with the Project Area located within the Mid Valley Disposal Company service area. No solid waste is currently generated in the Project Area. The American Avenue Disposal Site is permitted to receive 2,200 tons of waste per day; it had a remaining capacity of approximately 29,358,535 cubic yards as of July 29, 2005, and is expected to reach its permitted capacity in 2031 (California Department of Resources Recycling and Recovery [CalRecycle] 2024a). The Mid Valley Disposal Recycling and Transfer Station is a limited volume transfer operation with a maximum permit capacity of 4,600 tons per year and is approximately 17.2 miles west of the Project (CalRecycle 2024b). The City of Clovis Landfill has a remaining capacity of 7,740,00 cubic yards with an estimated closure date of 2047 and approximately 55.7 miles northeast of the Project Area (CalRecycle 2024c).

3.19.2.7 Electric Power, Natural Gas, and Telecommunications

Pacific Gas and Electric Company (PG&E) has existing electrical and transmission facilities in the Project area, including the PG&E Gates Substation that would connect to the Project. Southern California Gas (SoCalGas) is the natural gas provider in this area of Fresno County. There are no known natural gas pipelines or telecommunication lines in the Project Area. A gas pipeline easement is located within the Project Area.

3.19.3 Regulatory Setting

3.19.3.1 Federal

There are no applicable federal regulations for this issue area.

3.19.3.2 State

California Energy Commission

The California Energy Commission (CEC), created in 1974, is the State's primary energy policy and planning agency. The CEC has five major responsibilities: forecasting future energy needs and preserving historical energy data, licensing thermal power plants 50 megawatts or larger, advancing energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the state response to energy emergencies.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment known as

the Railroad Commission at the time. In 1912, the Legislature passed the Public Utilities Act, expanding the Railroad Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Railroad Commission was renamed the California Public Utilities Commission. The CPUC is tasked with ensuring safe, reliable utility service is accessible to consumers, setting retail energy rates, and protecting against fraud.

California Department of Resources Recycling and Recovery

CalRecycle is the state agency appointed to oversee, manage, and track California's 76 million tons of waste generated each year. CalRecycle is one of the six agencies under the California Environmental Protection Agency. The agency administers and provides oversight for all of California' State-managed non-hazardous waste handling and recycling program. CalRecycle provides training and continuous support for local enforcement agencies that regulate and inspect California's active and closed solid waste landfills (CalRecycle 2024d).

State Water Resources Control Board and Regional Water Quality Control Board

The main responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs). The SWRCB sets statewide policy for the application of state and federal laws and regulations. The RWQCBs endorse and implement Water Quality Control Plans (Basin Plans), which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The Project Area falls within the jurisdiction of the Central Valley RWQCB.

California Department of Water Resources

The DWR is in charge of protecting, conserving, developing, and managing much of California's water supply. These responsibilities include preventing and responding to floods, droughts, and catastrophic events; informing and educating the public on water issues; developing scientific solutions; restoring habitats; planning for future water needs, impacts from climate change, and flood protection; constructing and maintaining facilities; generating power; ensuring public safety; and providing recreational events.

California Water Code Section 13260

California Water Code Section 13260 requires any person who discharges waste, not including a community sewer system, or proposes to discharge waste that could affect the quality of waters of the State to submit a report of waste discharge to the applicable RWQCB. Any Project activity that would be applicable under California Water Code Section 13260 would be reported to the Central Valley RWQCB.

Senate Bills 610 and 221

Senate Bills (SB) 610 and 221, passed in 2001, are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. The measures require that water supply assessment occur in the early stages of the land use planning process for all large-scale development Projects. If groundwater is the proposed supply source, the necessary assessments must include detailed analyses of historic, current, and Projected groundwater pumping and an evaluation of

the sufficiency of the groundwater basin to sustain a new Project's requirements. It is also required to have identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. Additionally, the supply and demand study must address water supplies during normal, single and multiple dry years, addressed in 5-year increments for a 20-year Projection. A WSA is required to accommodate these measures for a proposed industrial, manufacturing, or processing plant that would house more than 1,000 persons; occupy more than 40 acres of land; or have more than 650,000 square feet of floor area (California Water Code, Section 10912).

California Integrated Solid Waste Management Act of 1989 or Assembly Bill 939

Pursuant to the California Integrated Solid Waste Management Act of 1989 (Public Resources Code [PRC] Section 40050, et seq.) or AB 939, all cities in California need to decrease the amount of solid waste disposed in landfills. AB 939 required a reduction of 25 percent by 1995 and 50 percent by 2000. Contracts that include work that would generate solid waste, such as construction and demolition debris, have been targeted for participation in source-reduction, reuse, and recycling programs. Contractors are encouraged to manage solid waste generated by the work to divert waste from disposal in landfills (particularly Class III landfills) and maximize source reduction, reuse, and recycling of C&D debris.

Assembly Bill 341

Since the passage of AB 939, diversion rates in California have decreased to approximately 65 percent, the statewide recycling rate to approximately 50 percent, and the beverage container recycling rate to approximately 80 percent. In 2011, the State passed AB 341, which created a policy goal that a minimum of 75 percent of solid waste must be reduced, recycled, or composted by the year 2020. The State established the following strategies to achieve that 75 percent goal:

- Moving organics out of the landfill
- Expanding the recycling/manufacturing infrastructure
- Exploring new approaches for State and local funding of sustainable waste management programs
- Promoting State procurement of post-consumer recycled content products
- Promoting extended producer responsibility

The State recommended legislative and regulatory changes including mandatory organics recycling, solid waste facility inspections, and revising packaging in order to achieve the above strategies. In regard to construction and demolition, the State recommended an expansion of California Green Building Code standards that incentivize green building practices and increase diversion of recoverable construction and demolition materials. Standards currently require 50 percent waste diversion on construction and some renovation Projects, though this may be raised to 65 percent for nonresidential construction in upcoming changes to the standards. The State also encourages the recovery of construction and demolition materials suitable for reuse, compost or anaerobic digestion before residual wastes are considered for energy recovery.

California Solid Waste Reuse and Recycling Access Act of 1991 or Senate Bill 1327

The California Solid Waste Reuse and Recycling Access Act of 1991 (PRC Chapter 18) requires state and local agencies to address access to solid waste for source reduction, recycling, and composting activities. This act identified a lack of adequate areas for collecting and loading recyclable materials, resulting in a significant impediment to diverting solid waste. Each local agency must adopt an ordinance related to adequate areas for collecting and loading recyclable materials for development Projects.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) requires local-controlled groundwater sustainability agencies to be formed in high- and medium-priority groundwater basins. These groundwater sustainability agencies are responsible for creating and implementing a Groundwater Sustainability Plan (GSP) to ensure the basin is operated within its sustainable yield without causing unsatisfactory results. The Project Area is located within the Westside Subbasin of the San Joaquin Valley Groundwater Basin. The WWD was designated as the groundwater sustainability agency (GSA) responsible for the Westside basin. As the responsible GSA, the WWD has developed and is in the process of implementing the GSP to assist with avoiding undesirable results (overdraft and subsidence) and help mitigate such results (Luhdorff & Scalmanini 2022). As stated previously in the WSA, the Westside Subbasin is considered a critically overdrafted subbasin by DWR, and as such, is designated as a High Priority subbasin (those having the greatest need for planning and mitigation) (DWR 2024).

Prior to SGMA, litigation was the primary procedure for solving groundwater disputes and protecting groundwater basins. When over-pumping caused a crisis like seawater intrusion or chronic overdraft, people had little choice but to file a lawsuit—called an adjudication—in which all rights to water in a basin could be defined by a court. SGMA now assures that basins can be managed sustainably through local management plans. Governor Brown signed AB 1390 in October 2015, which provides legislation for a comprehensive adjudication process for all groundwater basins that are regulated under the SGMA. Groundwater basins that have been adjudicated by court decision are accountable to management by a court-approved Watermaster.

The primary method for achieving the sustainability goal of the GSP is to establish a framework for limiting the annual volume of water pumped from individual wells and for monitoring the volumes of pumped groundwater. The limits placed on an individual well establishes the annual volume of water for the acres attached to (serviced by) the well. Table 3.19-1 shows the annual volumes allowed per well and the schedule for reduction of this amount to reach sustainable levels. While the sustainable yield is the goal every year, during the transition period (until 2030), an additional transition allocation (as shown in Table 3.19-1) is allowed, raising the actual allocation (if needed) to the Allocation Cap. There are allowances for carrying over any unused transition allocation to the following year, with some limitations.

Table 3.19-1. WWD Annual Groundwater Allocation				
Year	Allocation Cap	Transition Allocation	Sustainable Yield	Project Allocation* (AFY)
	(AFY per Gross Acre)			
2022	1.3	0.7	0.6	—
2023	1.3	0.4	0.6	—
2024	1.2	0.6	0.6	—
2025	1.1	0.5	0.6	1,174
2026	1.0	0.4	0.6	1,067
2027	0.9	0.3	0.6	960
2028	0.8	0.2	0.6	854
2029	0.7	0.1	0.6	747
2030–2052	0.6	0.0	0.6	640

Notes: * Project allocation based on two wells, associated with a total area of 1,067 acres
AFY = Acre-feet per year; GSA = groundwater sustainability agency; WWD = Westlands Water District

Source: WWD-GSA 2023

3.19.3.3 Local

Fresno County Construction & Demolition Waste Management Plan

The Fresno County Construction & Demolition Waste Management Plan is designed to assist the County with compliance of the AB 939, which requires cities and counties to reduce, , the amount of waste disposed of in landfills by 65 percent by the year 2000 and beyond, or potentially incur monetary fines. The plan provides developers with a means of documenting the waste reduction requirements included in the latest edition of the California Green Building Standards Code (CALGreen, Section 4.408.1-5).

County of Fresno Solar Facility Guidelines

To accommodate new renewable energy technology while balancing the need to protect important farmlands and minimize impacts to existing agricultural operations, the County has provided guidelines for evaluating solar facilities. The following guideline addresses a point of concern related to utilities and service systems:

Information shall be submitted that identifies the source of water for the subject parcel (e.g., surface water from irrigation district, individual well(s), conjunctive system). If the source of water is via district delivery, the applicant shall submit information documenting the allocations received from the irrigation district and the actual disposition of the water (i.e., utilized onsite or moved to other locations) for the last 10 years. If an individual well system is used, provide production capacity of each well, water quality data, and data regarding the existing water table depth (Fresno County 2017).

Westside Subbasin Groundwater Sustainability Plan

The Project is located within the Westside Subbasin, which is ranked as high priority and identified as being subject to critical overdraft conditions under SGMA. The WWD GSA was formed in order to comply with SGMA. The WWD GSA prepared a GSP in January 2020 in order to comply with SGMA and serve as a comprehensive foundation for the groundwater management within areas of the Westside Subbasin covered by the WWD. The Groundwater Sustainability Plan provides information on the current groundwater conditions; providing sustainability goals, to be achieved through the utilization of management actions and projects; and demonstrating how sustainability would be achieved through the 20-year implementation period.

Fresno County General Plan

The Fresno County General Plan, Public Facilities and Services Element (Fresno County 2024) contains the following policies related to utilities and service systems that are relevant to the Project:

- *C. Water Supply and Delivery*
  - *Goal PF-C:* To ensure the availability of an adequate and safe water supply for domestic and agricultural consumption.
    - *Policy PF-C.11:* The County shall approve new development only if adequate sustainable water supply to such development is demonstrated.
    - *Policy PF-C.23:* The County shall require that all new development within the county use water conservation technologies, methods, and practices as established by the County.
    - *Policy PF-C.24:* The County shall encourage the use of reclaimed water where economically, environmentally, and technically feasible.
    - *Policy PF-C.28:* The County shall generally not approve land use-related projects that incorporate a man-made lake or pond that will be sustained by the use of groundwater.
- *E. Storm Drainage and Flood Control*
  - *Goal PF-E:* To provide efficient, cost-effective, and environmentally-sound storm drainage and flood control facilities that protect both life and property and to divert and retain stormwater runoff for groundwater replenishment.
    - *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 stormwater drainage systems to preserve and enhance natural drainage features.
    - *Policy PF-E.21:* The County shall require the use of feasible and practical best management practices (BMP) to protect streams from the adverse effects of construction

activities and shall encourage the urban storm drainage systems and agricultural activities to use BMPs.

- *F. Landfills, Transfer Stations, and Solid Waste Processing Facilities*
  - *Goal PF-F:* To ensure the safe and efficient disposal or recycling of solid waste generated in the county in an effort to protect the public health and safety.
    - *Policy PF-F.5:* The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.
    - *Policy PF-F.8:* The County has designated the American Avenue Landfill as the regional landfill to serve the incorporated and unincorporated areas of the county. The publicly-operated Coalinga and Clovis landfills may continue to operate provided the sites are operated economically and in compliance with all environmental laws and regulations. Existing publicly-operated landfills may be expanded.
- *J. Utilities*
  - *Goal PF-J:* To provide efficient and cost-effective utilities that serve the existing and future needs of people in the unincorporated areas of the county.
    - *Policy PF-J.1:* The County shall encourage the provision of adequate gas and electric, communications, and telecommunications service and facilities to serve existing and future needs.

3.19.4 Impact Analysis

3.19.4.1 Methodology

Potential impacts to utilities and service systems associated with construction and operation of the Project have been analyzed using a variety of resources, including multiple online sources and published documents, as well as the Project-specific WSA (Appendix L). In addition, current data obtained from the County and State of California about the capacity of landfills was used to identify potential impacts. Using these resources and professional judgment, impacts were evaluated according to significance criteria established in Appendix G of the CEQA Guidelines and described below.

3.19.4.2 Thresholds of Significance

The following criteria established in Appendix G of the CEQA Guidelines were used to analyze and evaluate if a Project could potentially have significant adverse effects on utilities and service systems.

A Project could have a significant adverse effect on utilities and service systems if it would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- 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 the provider's existing commitments;
- 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; or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.19.4.3 Impact Discussion

Threshold 1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Construction

Water

During construction and decommissioning, water would be primarily used for dust suppression and soil compaction during ground-disturbing activities. Water use is estimated to be approximately 120 AFY, or about 200,000 gallons per workday over the Project's anticipated 9-month construction period (assuming a 5-day work week). The existing pond would have water available at the beginning of the construction period and filled regularly from the two onsite wells for all construction water needs, including fire suppression. The average rate of water withdrawals from the pond during the construction period would be about 200,0000 gallons per day, then occasionally used during the operation period for panel washing and emergency use for fire suppression. It is estimated that the pond would need to be periodically replenished about 2.92 AF or 950,000 gallons per month with water pumped from the wells. According to the WSA, water supply for construction would come from the two existing onsite wells pumping groundwater from the Westside Subbasin, regulated by the WWD for the subbasin under SGMA. Potable drinking water would be trucked in from offsite, most likely as bottled water. No imported surface water from the SWP through the WWD would be used by the Project (Tetra Tech 2025i). Therefore, the Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects and impacts would be less than significant.

Wastewater Treatment

A minimal amount of wastewater would be generated from the construction of the Project. The Project would not require connection to any septic systems or sewer infrastructure. Temporary sanitary facilities

such as portable restrooms would be provided during construction and would not require a water supply. Wastewater would be contained within portable toilet facilities and portable hand washing facilities, then disposed of at an approved offsite disposal site. No offsite sewage or disposal connections to a municipal sewer system are present within the Project Area and are not proposed for the Project. Therefore, construction of the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects and impacts would be less than significant.

Stormwater Drainage

As discussed in Section 4.10, no natural drainage course traverses the Project Area and the nearest established channel, Los Gatos Creek, is approximately 1.1 miles northwest of the Project Area. The Project would include minimal excavation and grading during site preparation, which would alter the existing drainage patterns onsite. However, the Project would be designed so the control of runoff would be maintained or improved over the runoff conditions currently found at the Project Area prior to construction. Grading for drainage and stormwater retention basins would be conducted per County-approved grading and drainage plans. The Project would be required to adhere to Fresno County Public Works Department stormwater requirements, which include BMPs to address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. Additionally, in compliance with National Pollutant Discharge Elimination System General Construction Permit requirements, the Project would design and submit a site-specific Storm Water Pollution Prevention Plan (SWPPP) to minimize the discharge of wastewater during construction and a Water Quality Management Plan that include BMPs for runoff control. Additionally, the Project would be required to complete a hydrologic study and final drainage plan designed to evaluate and minimize potential increases in runoff from the Project Area.

Therefore, the Project would not result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects and impacts would be less than significant.

Electric Power

Electricity is not anticipated to be consumed in large quantities during the construction phase, as the equipment and vehicles used are typically diesel- or gasoline-powered. The Project Area is within PG&E's service territory, and electric power for construction would be brought to the Project Area through a new PG&E service connection. Construction of the Project would not displace existing electrical facilities and would tie into existing offsite facilities. Relocation of electrical facilities would not be required. Therefore, construction and installation of the new electrical infrastructure would potentially cause a temporary environmental effect on electrical power, the disturbance would be minimal and short-lived and impacts would be less than significant.

Natural Gas

No natural gas pipelines are present within the Project Area. Natural gas would not be required for the construction of the Project. As the construction of the Project would not require or result in the relocation or construction of new or expanded natural gas facilities, no impact would occur.

Telecommunications

Telecommunication equipment such as telecommunication lines, would be required to be installed in the construction phase of the Project. The Project would require connection with the existing local telecommunication service, typically consisting of fiber optic cable and/or 25-pair telephone line installed above or below ground, attached to either the existing distribution lines or installed adjacent to the Project Substation. The telecommunication line would use both existing poles and new poles, as well as below ground installations. When considering impacts resulting from the installation of any required telecommunications infrastructure, all impacts are of a relatively short duration and would cease to occur when installation is complete. Any construction activities that may affect service to the existing telecommunication lines would be coordinated with service providers. As such, impacts would be less than significant.

Operation

Water

The expected operational lifetime of the Project is 35 years, operating continuously 7 days a week, until the anticipated Project lifetime is reached. The Project would require water usage during operations for periodic solar panel cleaning and fire suppression. Solar panel washing would be required to remove dust and maintain efficiency. Though the frequency of panel washing activities would depend on site-specific conditions such as wind and rain, it is assumed that panel washing would occur twice per year and use approximately 0.5 AFY of water. Water for panel washing would be sourced from the two existing wells located in Subarea A of the Project Area. Additionally, water would be required as an emergency fire suppression supply during operations. The onsite pond, which is currently used for irrigation water storage, would be utilized as a source of water for emergency fire suppression. It is estimated that the pond would need to be periodically replenished (approximately 2.92 AF, or 950,000 gallons per month) with water pumped from the wells. However, the Project's operational water consumption is anticipated to be no more than 1 AFY, primarily used for panel washing. Therefore, the operation of the Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects and impacts would be less than significant.

Wastewater

Once in operation, the Project would be managed remotely, with no permanent employees onsite. No permanent wastewater facilities, such as septic tanks, would be required; therefore, wastewater would not be generated during operation. Portable restroom facilities would be utilized for periodic O&M activities. The Project would not require new wastewater treatment facilities to be constructed and operational impacts would be less than significant.

Stormwater Drainage

As discussed in Section 3.10, the potential for erosion and sedimentation during Project operation caused by increased runoff from impervious surfaces would be very limited. No onsite facilities, including fences and panel posts, should prevent stormwater flow. During Project operations, the implemented stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would maintain or improve the existing runoff conditions in the Project Area. The Project would require an approved engineered grading and drainage plan in lieu of a final drainage plan prior to the issuance of a grading permit and commencement of any construction activities, which would demonstrate that the design of the Project would minimize potential increases in runoff. Stormwater management features would be consistent with existing regulatory requirements and would minimize any erosion or sedimentation and flood flows to less than significant levels. The Project would comply with the SWPPP, drainage plan and all applicable regulations regarding stormwater drainage. Therefore, operation of the Project is not anticipated to result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects and impacts would be less than significant.

Electric Power

Electricity consumption during operations would occur primarily from solar panel maintenance, operation of the Battery Energy Storage System, operation of facilities and substation and pumping of groundwater. As described in Section 4.6, electricity consumed during operation of the Project would be offset by the power produced by the solar panels. The Project proposes four collection line options (1-4). Solar panels would generate up to 171,500,000 kWh of electricity annually and offset onsite electricity use from operations and groundwater pumping. Therefore, operation of the Project would not require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects; impacts would be less than significant.

Natural Gas

Natural gas would not be used during the operation phase of the Project. Therefore, operation of the Project would neither require nor result in the relocation or construction of new or expanded natural gas facilities, the construction or relocation of which could cause significant environmental effects; impacts would be less than significant.

Telecommunications

Telecommunication lines would be installed as part of the construction phase of the Project and may need occasional maintenance through the operation phase. Any required maintenance would be coordinated with service providers. Due to the relatively minor nature of telecommunications installations in comparison to impacts from the rest of the Project, and the fact that no lines are being removed or relocated, telecommunications-related impacts would be less than significant.

Threshold 2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Water requirements for the Project during construction and operation were determined in the WSA prepared for the Project. The Project's construction water demand is estimated to be 120 AFY for a 9-month construction period, no more than 1 AFY for the operational life of the Project (approximately 35 years), and approximately 136 AFY for decommissioning of the Project (9 months). Bottled potable water for drinking and domestic use during construction, operation, and decommissioning would be trucked in to the Project Area. Water required during construction and decommissioning would be supplied from the two onsite wells pumped from the Westside Subbasin, while water during operations would come from the onsite pond. The onsite pond would also be replenished from the onsite wells, which would occur per month (approximately 2.92 AF or 950,000 gallons.

The WSA complies with the California Water Code, as amended by SB 610. By adhering to SB 610, the WSA evaluated the availability of water supply source(s) needed to meet the expected water demands of the Project under three scenarios: (1) a normal year (the *no drought* scenario), (2) a single-dry-year (the *limited drought* scenario), and (3) multiple dry-years (the *extended drought* scenario), over a 20-year planning horizon. The Westside Subbasin is considered a High Priority basin and measures have been established to limit the withdrawal of groundwater by wells in the subbasin. Even under the new limits of withdrawal, the projected use of groundwater by the Project during construction would be well within the allocation cap; during operations the projected annual water use of 36.5 AF would be far less than the allocation cap, even after the cap reaches its ultimate goal in 2030 (88 AFY). The lifecycle of the Project would eliminate the use of over 23,700 AF of groundwater because the current agricultural uses of the Project would end when construction begins.

Based on the estimated Project water demand for construction and operation, there would be a sufficient water supply to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years; therefore impacts would be less than significant.

Threshold 3: Would the project result in a determination by the waste water treatment provider which may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The Project is not expected to generate a significant amount of wastewater as no offsite sewage or disposal connects to a municipal sewer system exist or are proposed for operations. Wastewater generated from the temporary portable sanitary facilities would be disposed of by a contractor at an approved offsite location. Therefore, the Project would not result in a determination by the wastewater treatment provider that it has adequate capacity to serve the Project's demand in addition to the provider's existing commitments; impacts would be less than significant.

Threshold 4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction

The Project is not expected to generate a substantial amount of solid waste during construction. Currently, the Project Area is not developed and would not require demolition or removal of large debris. Materials brought to the Project Area would be used to construct facilities, and few residual materials are expected. Solar modules would be delivered to the site via shipping containers packaged via use of wood and cardboard materials. The shipping containers materials for module deliveries would be recycled and are not anticipated to generate non-recyclable waste. Common construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. Any hazardous waste generated during construction would be disposed of at an approved location. The building contractor would arrange to have trash, construction material recycling, and regular recycling bins delivered to the Project Area in accordance with Fresno County Building Code requirements. During construction, efforts would be made to minimize the use and disposal of packing materials and construction material waste. Construction recycling, regular recycling, and non-recyclable trash would be picked up regularly during the construction phase. All Project components would arrive by truck on pallets and removed from the Project Area by the same truck.

Non-hazardous construction refuse and solid waste would either be collected and recycled or disposed at a local landfill. The closest municipal landfill is the American Avenue Disposal Site, which is approximately 40 miles north of the Project Area, in the City of Delano. The American Avenue Disposal Site has a remaining capacity of 29,358,535 cubic yards with an estimated closure year of 2031 (CalRecycle 2024a). The American Avenue Disposal Site is a Class III landfill and therefore, accept wastes from construction and demolition as well as industrial sources, but does not accept hazardous waste, hot ashes, and liquids of any kind. Any hazardous waste generated from construction of the Project would be disposed of at a permitted and licensed treatment and/or disposal facility.

Operation

The operation phase of the Project is expected to generate little to no solid waste. Any waste generated onsite would result from maintenance activities, such as responding to abnormal operating conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance (i.e., vegetation management). Onsite operation and maintenance activities are anticipated to require site visits once or twice a month, consisting of a small ground crew. The American Avenue Disposal Site would continue to operate through 2031 and is expected to serve the Project until the landfill ceases operation. Fresno County also operates is the Shaver Lake Transfer Station, which is located in the City of Shaver Lake and operated in partnership with Fresno County, Granite Solid Waste, and the U.S. Forest Service. In addition to the Shaver Lake Transfer Station, the Fresno County General Plan, Public Facilities Element Policy PF-F.8 states that:

> "the (Mid Valley Disposal Recycling & TS- Coalinga) and Clovis landfills may continue to operate provided the sites are operated economically and in compliance with environmental laws and regulations. Existing publicly-operated landfills may be expanded" (Fresno County 2024b).

The Mid Valley Disposal Recycling & TS Landfill is a limited volume transfer operation with a max permit capacity of 4,600 tons per year and is approximately 17.2 miles west of the Project. The City of Clovis Landfill has a remaining capacity of 7,740,00 cubic yards with an estimated closure date of 2047 and approximately 55.7 miles northeast of the Project Area (CalRecycle 2024b, 2024c). With these other landfill options available, there would be sufficient landfill support for the Project's operation phase in the event the American Avenue Disposal Site ceases operation.

Decommissioning

The estimated operational lifespan of solar PV panels is 30 to 35 years. Solar PV panels contain valuable materials that would likely be recycled at the end of their lifecycle. Decommissioning of the collection lines would not generate substantial amounts of solid waste. As stated above, the American Avenue Disposal Site is expected to be in operation through 2031, however the landfill is expected to close when the decommissioning activities would occur. Similar to the operation phase of the Project, other landfill options such as the Shaver Lake Transfer Station as well as the Mid Valley Disposal and City of Clovis landfills may be available during the decommissioning phase of the Project, as well as other publicly-operated landfills that may be expanded (Fresno County 2024b). After decommissioning is complete, the Project Area would return to predevelopment conditions or converted to other uses in accordance with applicable land use regulations in effect at that time. The Project would not generate solid waste more than state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and impacts related to landfill capacity would be less than significant.

Threshold 5: Would the project comply with Federal, State, and Local management and reduction statutes and regulations related to solid waste?

The Project would produce solid waste during construction, operation and decommissioning. Waste that could potentially be generated from the Project include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste related to land development. AB 939 requires Fresno County to attain specific waste diversion goals. Additionally, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the Project. AB 341 was passed by the State in 2011, establishing the policy goal that a minimum of 75 percent of solid waste must be reduced, recycled, or composted by the year 2020. In addition, as part of compliance with CALGreen requirements, Fresno County would require a Waste Management Plan to be prepared for the Project, as outlined in the County's Construction and Demolition Debris Recycling Requirements. The Project would be required to comply with all federal, state and local statues and regulation involving the handling and disposal of solid waste; therefore, impacts would be less than significant.

3.19.5 Mitigation Measures

No mitigation is required.

3.19.6 Level of Significance After Mitigation

Impacts would be less than significant.

3.20 Wildfire

3.20.1 Introduction

This section describes the affected environment and regulatory setting for wildland wildfire. This section includes the physical and regulatory setting for the Proposed Project, the methods used in evaluating these potential impacts, the criteria used to examine the significance of the potential impacts, and an analysis of the potential impacts from wildfire. According to the CEQA Guidelines Appendix G, impacts related to wildfires would be considered significant if the Proposed Project would (1) substantially impair an adopted emergency response plan or emergency evacuation plan; (2) 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; (3) require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or (4) expose people or structures to significant risks, including downslope or downstream flood or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

This analysis is based on the following:

- California Department of Forestry and Fire Protection (CAL FIRE) Fresno County (County) Fire Hazard Severity Zone (FHSZ) Maps (CAL FIRE 2024)
- Biological Resources Evaluation Revised Report, San Luis West Solar Project (Tetra Tech 2025d; Appendix G)
- Geology and Soils Report, San Luis West Solar Project (Tetra Tech 2025h; Appendix K)

3.20.2 Environmental Setting

3.20.2.1 Site Characteristics and Fire Environment

The Project Area consists of undeveloped agricultural lands and is currently used for grazing. Topography across the Project Area is relatively flat, with elevations ranging from approximately 150 to 450 feet above Mean Sea Level (MSL). The land surrounding the Project Area is primarily used for agriculture and solar photovoltaic facilities, with the Governor Edmund G. Brown California Aqueduct located adjacent to the Project Area.

CAL FIRE classifies FHSZs based on factors including fuel, slope, and fire weather to identify the degree of fire hazard throughout California (i.e., moderate, high, or very high). Although FHSZs do not predict where or when a wildfire will occur, they do identify areas where wildfire hazards could be more severe. According to the Fresno County State Responsibility Area (SRA) Fire Hazard Severity Zones map, the Project Area is not located within an SRA or Federal Responsibility Area; given this designation, the Project Area is located outside of areas identified by CAL FIRE as having substantial or very high risk. The Project Area is located within a Local Responsibility Area (LRA); however, the Project Area does not overlap with

an FHSZ in an LRA (CAL FIRE 2023a); therefore, the wildland fire hazard risk within the Project Area is relatively low.

3.20.2.2 Fire History

An understanding of fire history can provide crucial information regarding fire frequency, fire type, the most vulnerable Project areas, and significant ignition sources. The fire history represented in this section uses CAL FIRE's Fire and Resource Assessment Program database (CAL FIRE 2022). Based on a review of this database, no fires in the recorded history (since 1950) have burned across the Project Area. The nearest fire to the Project Area was the Mineral Fire—located approximately 26 miles west of the Project Area along Parsons Road 41 in the City of Coalinga—which occurred on July 12, 2020 and burned a total of approximately 29,337 acres (CAL FIRE 2023b).

3.20.2.3 Vegetation (Fuels)

As discussed in the Biological Resources Evaluation Report prepared for the Proposed Project, the Project Area has been cleared for agricultural use and is flat with two large Athel tamarisk (*Tamarix aphylla*) trees located in Subarea B and oleander (*Nerium oleander*) hedgerows bordering the northern and western portions of Subarea A. Frequent disturbances related to tilling and farming within the Project Area have removed all naturally occurring vegetation communities and habitats from the farmed portions of the Project Area. Disturbed retention basins and drainage ditches occur on the border of multiple Project Area parcels and within a 150-meter buffer of the Project Area.

3.20.3 Regulatory Setting

3.20.3.1 Federal

No federal regulations pertaining to wildfire apply to the Project.

3.20.3.2 State

2022 California Fire Code

The 2022 California Fire Code (Fire Code) (24 California Code of Regulations [CCR] 9) establishes regulations to protect against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also provides requirements to provide safety for and assistance to firefighters and emergency responders during emergency operations. The Fire Code provisions apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. Chapter 6 (Building Services and Systems) of the Fire Code focuses on building systems and services related to potential safety hazards and when and how they should be installed. Building services and systems are addressed, including emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Fire Code describes general fire safety precautions to manage

required levels of fire protection, limit fire spread, establish the correct operation of equipment, and promote prompt response to fire emergencies. The Fire Code includes regulations regarding fire-resistance-rated construction; fire protection systems such as alarm and sprinkler systems (for inhabited structures); fire service features such as fire apparatus access roads; means of egress; fire safety during construction and demolition; and wildland-urban interface areas.

2022 California Building Code, Chapter 7A

Chapter 7A of the 2022 California Building Code outlines the materials, systems, and/or assemblies used in the exterior design and construction of new buildings found within a Wildland-Urban Interface Fire Area. Section 702A defines a Wildland-Urban Interface Area as a geographical area identified by the State as a *Fire Hazard Severity Zone* in accordance with Public Resources Code Sections 4201 to 4204 and Government Code Sections 51175 to 51189 or as other areas designated by the enforcing agency to be at a significant risk from wildfires. The 2022 California Building Code describes the materials, systems, and assemblies used for structural fire resistance and fire-resistance-rated construction, separation of adjacent spaces to safeguard against the spread of fire and smoke in a building, and the spread of fire to or from buildings.

Public Resources Code 4291 to 4299

California Public Resources Code Sections 4291 to 4299 et seq. requires the maintenance of brush, flammable vegetation, or combustible growth within 100 feet of buildings. Vegetation that is more than 30 feet from a building, less than 18 inches high, and important for soil stability may be preserved, as may single specimens of trees or other vegetation that are maintained to manage fuels and do not form a means of rapid-fire transmission from other nearby vegetation to a structure. California Public Resources Code Sections 4291 to 4299 et seq. apply to both SRAs and high fire threat districts, which are decided by the California Public Utilities Commission pursuant to its rulemaking authority. The Public Resources Code also outlines infraction fees, certification, and compliance procedures applicable with state and local building standards, including those described in Government Code Section 51189(b).

3.20.3.3 Local

Fresno County General Plan

The following goals and policies regarding wildfire concerns from the Fresno County 2024 General Plan Health and Safety and Fire Protection and Emergency Medical Services Elements apply to the Project (Fresno County 2024):

- *Health and Safety Element*
  - *Goal HS-B:* To minimize the risk of loss of life, injury, and damage to property and natural resources resulting from fire hazards.
    - *Policy HS-B.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.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 points of ingress and egress. The County shall implement feasible recommendations in Assembly Bill 2911 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-B.15:* 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.

- *Fire Protection and Emergency Medical Services Element*
  - *Goal PF-H:* To ensure the prompt and efficient provision of fire and emergency medical facility and service needs, to protect residents of and visitors to Fresno County from injury and loss of life, and to protect property from fire.
    - *Policy PF-H.2:* Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in unincorporated areas of the County shall not be approved unless adequate fire protection facilities are provided.
    - *Policy PF-H.5:* The County shall require that new development be designed to maximize safety and minimize fire hazard risks to life and property.
    - *Policy PF-H.7:* The County shall encourage local fire protection agencies in the County to maintain the following as minimum fire protection standards (expressed as Insurance Service Organization (ISO) ratings):
      - ISO 4 in urban areas
      - ISO 6 in suburban areas
      - ISO 8 in rural areas

- *Policy PF-H.8:* The County shall encourage local fire protection agencies in the County to maintain the following as minimum standards for average first alarm response times to emergency calls:
  - 5 minutes in urban areas
  - 15 minutes in suburban areas
  - 20 minutes in rural areas
- *Policy PF-H.9:* The County shall require new development to develop or to pay its fair share of the costs to fund fire protection facilities that, at a minimum, maintain the service level standards in the preceding policies.
- *Policy PF-H.10:* The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the Uniform Fire Code and other State and local ordinances.

Fresno County Fire Code

Chapter 15.10 of the County Municipal Code details the Fresno County Fire Code, which is an adoption of the 2022 edition of the California Fire Code with some amendments (24 CCR 9).

Fresno County Multi-Jurisdictional Hazard Mitigation Plan

Fresno County, along with 17 participating jurisdictions, prepared the Fresno County Multi-Jurisdictional Hazard Mitigation Plan (Hazard Mitigation Plan) to reduce or eliminate long-term risk to people and property of the County from hazard events (Fresno County 2018). The Hazard Mitigation Plan was originally developed in 2007-2008 and approved by the Federal Emergency Management Agency (FEMA) in 2009, with a comprehensive update in 2017-2018. The County followed a planning process in alignment with FEMA guidance during its original development and update, which began with the creation of a Hazard Mitigation Planning Committee (HMPC) containing key county, city, and district representatives and other stakeholders. The HMPC completed a risk assessment that identified and profiled hazards, such as wildfire, that pose a risk to Fresno County. The committee analyzed the County's vulnerability to these hazards and examined the capabilities in place to mitigate them, creating goals and objectives for reducing the County's vulnerability to the identified hazards.

3.20.4 Impact Analysis

3.20.4.1 Thresholds of Significance

According to the CEQA Guidelines Appendix G Environmental Checklist, the County analyzed and evaluated the following questions to determine if impacts related to wildfire would be significant.

If located in or near SRAs or lands classified as very high fire hazard severity zones, would the Project:

- substantially impair an adopted emergency response plan or emergency evacuation plan;

- due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

3.20.4.2 Impact Discussion

Threshold 1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Project Area is not located within a designated high fire hazard severity zone. According to the Fresno County Multi-Jurisdictional Hazard Mitigation Plan, the Project Area is not located in an area identified as having exposure to potential hazards or within an identified evacuation route (Fresno County 2018). During construction of the Project, heavy construction-related vehicles could interfere with emergency response to the Project Area or evacuation procedures in the event of an emergency (e.g., by slowing vehicles traveling behind construction vehicles). Access to the Project Area would be maintained throughout construction, and appropriate detours would be provided in the event of potential road closures. The Project would comply with the goals and objectives in the Hazard Mitigation Plan, including adequate ingress and egress routes, development setbacks, pest management plans, and weed management plans. For these reasons, impacts would be less than significant.

Threshold 2: Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The topography of the Project Area is flat, with elevations ranging from 150 to 450 feet above MSL. As discussed in Section 3.20.2.1, the Project Area is not located within an SRA or within a designated very high FHSZ. The closest very high FHSZ is located 21.5 miles west of the Project Area, west of the City of Coalinga in the Coastal Mountain Range. Given the substantial distance of the closest very high FHSZ and the flat topography within the Project Area, the Proposed Project would not exacerbate potential fire conditions within or around the Project Area. Additionally, Project construction would comply with applicable fire codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. For these reasons, the Project would not, 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; therefore, impacts would be less than significant.

Threshold 3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Proposed Project includes a single 230 kilovolt interconnection gen-tie line to transfer energy from the new substation in Subarea A of the Project Area to the Pacific Gas and Electric Company Gates Substation. Other related Project infrastructure includes internal roads, medium voltage collection lines, a Battery Energy Storage System (BESS), and an Operations and Maintenance building.

The Project would include a BESS, which could burn or become damaged by fire and generate fumes and gases that are extremely corrosive. The BESS would be constructed of non-combustible material, with consideration given for direction of gas or fire release away from first responders in the case of a catastrophic failure. The fire suppression system would be designed in accordance with federal, state and local regulations. As stated in the Project Description, water would be the primary fire suppression agent. Water would be available within standard distances, as approved by the County. To further increase safety, the battery units would be low voltage, encased in a steel enclosure, and are set apart from combustible materials. The BESS would also have a fire rating in conformance with County standards and specialized fire suppression systems installed for the BESS. A thermal management system or heating, ventilation, and air conditioning system is expected to be utilized to control temperature and humidity in the BESS.

The Proposed Project would utilize the existing interior access roads; however, these roads may be improved with the addition of an aggregate base or other native material with a soil stabilization material, if necessary. Interior and perimeter access routes would be designed to meet applicable operations and maintenance and public safety access requirements. The Project does not propose public road improvements; however, driveways connecting public roads to the interior road system may be installed, or improvements may be made for existing public road access points. All road improvements would comply with development requirements for emergency access, and, therefore, would not exacerbate fire risk that could result in temporary or ongoing impacts to the environment.

The use of maintenance vehicles could increase fire risk due to driving heated mufflers over vegetated areas. The installation of utilities including the gen-tie, BESS, and internal/perimeter maintenance roads would not be placed within an FHSZ, and existing vegetation would be cleared throughout the Project Area; therefore, the Project would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Additionally, as discussed in Section 4.14, the Project proponent/operator would develop and implement a Project-specific Fire Safety Plan that would contain notification procedures and emergency fire precautions consistent with the 2022 California Fire Code and the Fresno County Multi-Jurisdictional Hazard Mitigation Plan for use during construction, operation, and decommissioning. Implementing the Project-specific Fire Safety Plan would ensure that potential impacts related to the installation or maintenance of associated infrastructure would be reduced.

The Project would also comply with the Fresno County Solar Facility Guidelines (Fresno County 2017) and would retain a 50-foot buffer between Project facilities (excluding fencing) and surrounding properties.

This would provide a more than adequate buffer to stop the spread to surrounding areas, should a fire break out.

For these reasons, impacts would be less than significant.

Threshold 4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

According to the Project Geology and Soils report completed by Tetra Tech (Appendix K), the Project Area has very low topographic relief with no adjacent hills; therefore, the risk of landslide hazards within or near the Project Area is low. As referenced in Section 4.10, the Flood Insurance Rate Maps produced by FEMA for Fresno County show that the majority of the Project Area is located outside of a 100-year flood zone or any other special zone. Most of the Project Area is located within Zone X, an area of minimal flood risk, while the remaining portion is located within Zone A, an area where there is a 1 percent chance of flooding occurring in a given year, but no base flood evaluation determined (FEMA 2009). The Project Area may be moderately susceptible to erosion from surface water sheet flow and rill runoff; however, the relatively flat nature of the Project Area helps alleviate the erosion tendencies of the soil. The Project would be required to implement a Stormwater Pollution Prevention Plan that would include erosion and sediment control best management practices during construction, thereby reducing the potential of erosion and siltation during construction and controlling potential flooding events that could occur during construction. A limited amount of earthwork would be required for site preparation, decreasing the potential for water erosion of disturbed surfaces. Additionally, the Project Area drainage would be designed to follow the natural drainage pattern with none of the onsite facilities such as fencing and panel posts preventing stormwater flow. The Project would not expose people or structures to risks such as downslope or downstream flood or landslides as a result of runoff, post-fire slope instability, or drainage changes; therefore, impacts would be less than significant.

3.20.5 Mitigation Measures

No mitigation measures are required.

3.20.6 Level of Significance after Mitigation

Project-related impacts associated with wildfire would be less than significant.

4.0 OTHER ENVIRONMENTAL CONSIDERATIONS

This section provides brief discussions of other topics specifically mandated by CEQA. These topics include the following:

- Unavoidable significant adverse impacts
- Significant irreversible environmental changes
- Growth-inducing impacts
- Cumulative impacts

4.1 Significant Unavoidable Adverse Impacts

CEQA Guidelines Section 15126(c) requires the discussion of any significant impacts, including impacts "which can be mitigated but not reduced to a level of insignificance."

As discussed in Sections 3.1 through 3.20 of this Draft EIR, the Proposed Project would not result in any significant impact that cannot be avoided or mitigated. All significant impacts resulting from the Proposed Project would be reduced to less than significant with the mitigation measures identified in each of the individual resource sections in Chapter 3.0 of this Draft EIR.

4.2 Effects Found Not To Be Significant

Section 21100(c) of the Public Resources Code requires that an Environmental Impact Report (EIR) contain a statement that briefly explains the reasons why various possible significant effects of a project were determined not to be significant and were, therefore, not discussed in detail. None of the environmental resource topics listed in CEQA Guidelines Appendix G were determined to be not significant and eliminated from discussion in the Draft EIR.

4.3 Significant Irreversible Environmental Changes

CEQA Guidelines Section 15126(d) requires the discussion of significant irreversible environmental changes that would be caused by the Proposed Project should it be implemented. In accordance with the CEQA Guidelines:

> … uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damages can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

4.3.1 Nonrenewable Resources

Nonrenewable resources generally include agricultural land, biological resources, archaeological resources, paleontological resources, mineral deposits, water bodies, and some energy sources.

Implementation of the Proposed Project would require the irreversible consumption of natural resources and energy. Natural resource consumption would include lumber and other forest products, sand and gravel, asphalt, steel, copper, other metals, and water. Energy derived from nonrenewable sources such as fossil and nuclear fuels would be consumed due to the equipment fuel necessary for construction, operational lighting, and transportation uses.

As discussed in Section 3.2, approximately 1,091 acres of the Project Area is mapped as Prime Farmland (Tetra Tech 2025a) and would be converted to non-agricultural use for a minimum of 35 years before the Project is decommissioned. Project construction, operation, and maintenance is not expected to result in impacts to the chemical composition or compaction of onsite soils such that it would affect the Project Area's long-term suitability for agricultural use. The Project parcels are subject to Williamson Act Contracts and have been petitioned for cancellation by the landowners as part of the Project. The parcels subject to Williamson Act Contracts represent approximately 0.0001 percent of the State acreage and only 0.0007 percent of the contracted area in Fresno County (Tetra Tech 2025a).

As evaluated in Section 3.4, development of the Proposed Project could result in potentially significant impacts to burrowing owl, Swainson's hawk, San Joaquin kit fox, bats, raptors, and migratory birds; however, these impacts would be reduced to less than significant with the implementation of Mitigation Measures BIO-1 through BIO-8:

- Mitigation Measure BIO-1 requires focused surveys for the burrowing owl and biological monitoring in addition to the establishment of construction buffers for protection, if detected. In the event that avoidance is infeasible, a Burrowing Owl Exclusion and Mitigation Plan and Mitigation Land Management Plan is required for the passive relocation of the species.
- Mitigation Measure BIO-2 requires construction materials stored onsite be covered when not in use to deter burrowing owl attraction to the site.
- Mitigation Measure BIO-3 requires the pre-construction and site visits/checks be documented in a report and submitted to the County and CDFW.
- Mitigation Measure BIO-4 requires pre-construction surveys for Swainson's hawk nesting habitat if construction occurs during their breeding season. If active nests are found, a 0.5-mile buffer must be established until a qualified biologist determines that the nest is no longer active. If the 0.5-mile buffer is not feasible, consultation with CDFW is required to obtain an Incidental Take Permit.
- Mitigation Measure BIO-5 requires pre-construction surveys for general nesting birds and special-status avian species if activities with the potential to disrupt nesting birds or special-status avian species are scheduled to occur.

- Mitigation Measure BIO-6 requires a pre-construction den survey for San Joaquin kit fox. If an active den is found, coordination with CDFW and U.S. Fish and Wildlife Service (USFWS) is required to determine appropriate actions to continue construction. If the San Joaquin kit fox is detected onsite, consultation with USFWS and CDFW is required to determine methods to avoid take. If take cannot be avoided, consultation with CDFW and USFWS is required to obtain an Incidental Take Permit.
- Mitigation Measure BIO-7 requires training for special status species for all onsite construction workers.
- Mitigation Measure BIO-8 requires a pre-construction bat survey to determine if bat maternity roosts are present. If found, monitoring of the roost(s) is required by a qualified biologist to evaluate behavioral changes. If behavioral changes occur, the work causing the change shall cease and coordination with CDFW is required for additional avoidance and minimization measures. If an active bat maternity roost is proposed to be disturbed, consultation with CDFW and USFWS is required to identify additional avoidance and minimization measures.

Impacts to plant species, riparian habitat or other sensitive natural communities, and state or federally protected wetlands were found to be less than significant.

As discussed in Section 3.5, the Project Area has an overall low sensitivity for buried subsurface archaeological resources that qualify as historical resources. However, because the Proposed Project includes subsurface excavation to depths of approximately 10 feet, the possibility remains that unknown subsurface cultural resources that qualify as historical resources could be encountered. Impacts to unknown cultural resources that could qualify as significant historical resources would therefore be mitigated to less than significant through the implementation of Mitigation Measures CUL-1 through CUL-4:

- Mitigation Measure CUL-1 requires Project construction personnel to complete a cultural resource worker education awareness training.
- Mitigation Measure CUL-2 requires cultural resource monitoring prior to ground disturbing construction activities by a Secretary of the Interior-qualified Project archeologist.
- Mitigation Measure CUL-3 outlines requirements for the inadvertent discovery of archeological resources during construction.
- Mitigation Measure CUL-4 outlines requirements for the inadvertent discovery of human remains during construction.

As evaluated in Section 3.7, paleontological resources could be encountered (although unlikely) if excavations exceed a depth of 15 feet below the ground surface within the Project Area. This could result in potentially significant impact if paleontological resources are encountered and inadvertently destroyed during ground-disturbing activities. The inadvertent discovery of a paleontological resource during construction cannot be entirely discounted; therefore, implementation of Mitigation Measures GEO-1 and GEO-2 would reduce impacts to less than significant:

- Mitigation Measure GEO-1 requires that all onsite workers complete a Paleontological Worker Environmental Awareness Program (WEAP).
- Mitigation Measure GEO-2 outlines requirements for the inadvertent discovery of paleontological resources during ground-disturbing activities.

As evaluated in Section 3.8, total Project emissions would be 388 $MTCO_2e$ when considering both construction and operational emissions (Tetra Tech 2025c). This value is below the California Air Pollution Control Officers Association recommended threshold of 900 $MTCO_2e$. The Proposed Project's contribution to climate change, therefore, would not be considerable, and the Project would not conflict with the State's goal to reduce greenhouse gas (GHG) emissions. In addition, because the Project is intended to generate electricity from a renewable source of energy, it would not result in substantial GHG emissions due to the burning of fossil fuels once in operation. The Proposed Project would generate a maximum of 125 megawatt (MW) of electricity at any one time (Tetra Tech 2025c), which would serve to displace GHG emissions and, thus, assisting in the attainment of the State's goal to reduce GHG emissions. As such, operation of the Proposed Project would result in a substantial net reduction in GHG emissions, even when accounting for the minimal operational GHG emissions of the Proposed Project from a small number of periodic maintenance and vehicle trips.

4.3.2 Accidental Hazardous Release

As discussed in Section 3.9, diesel and gasoline fuels and other hazardous materials such as oils, solvents, hydraulic fluids, and paints would be used during Project construction; however, the use of such materials for the construction of the Proposed Project would not create a significant hazard to the public because the release of any construction-related spills would be prevented through the implementation of the Best Management Practices (BMPs) listed in the Stormwater Pollution Prevention Plan (SWPPP).

The Proposed Project involves the construction of a 125-MW solar photovoltaic (PV) electric generation facility coupled with an estimated 30 MW Battery Energy Storage System (BESS). Key Project components consist of PV modules (solar panels), collection and interconnection line systems, BESS components, a new substation, gen-tie line, access roads, and other minor components, including fencing and lighting. The new Project substation would include transformers, breakers, switches, meters, and related equipment.

The Project Applicant will be responsible for ensuring the removal and/or treatment of problematic insect and vertebrate pests from the Project Area. Rodent and insect pest populations are not expected to become an issue at the outdoor solar arrays; however, if rodent populations need to be actively managed and the infestation is indoors, rodenticides may be used if other methods of rodent control fail. Any chemicals will be applied or used according to manufacturer's specifications and in accordance with state and federal law and County guidelines. When not in use, chemicals will be stored in containment basins to prevent accidental leakage. The Project would adhere to the Pest Management Plan (Appendix E) prepared for the Project, which includes chemical control guidelines and practices to follow when the use of chemicals (e.g., herbicides, rodenticides, insecticides, or pesticides) is required to control or treat pests.

The Project would generate a small amount of waste during operation, such as broken or rusted metal, defective or malfunctioning equipment, electrical materials, empty containers, other miscellaneous solid waste, and typical refuse from the Operations and Maintenance (O&M) staff. Additionally, limited amounts of hazardous materials would be stored or used onsite during Project operation, including diesel fuel, gasoline, and motor oil for vehicles; mineral oil to be sealed within the transformers; and lead-acid-based or lithium-ion-based batteries for emergency backup. Appropriate spill containment and cleanup kits would be maintained during Project operation. Equipment containing hazardous materials would be equipped with spill containment areas, and battery storage would be in accordance with Occupational Safety and Health Administration requirements, such as inclusion of heating, ventilation, air conditioning, fire protection systems, and spill response supplies. All components would have a comprehensive Spill Prevention, Control, and Countermeasure (SPCC) Plan, in accordance with all applicable federal, state, and local regulations. Any hazardous materials that would be stored onsite would be contained in designated areas in accordance with a Hazardous Materials Business Plan (HMBP), which would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to minimize exposure to workers or the public. The Project Area would also be fenced to prevent public access to hazardous materials. Facilities that use and/or store hazardous materials and/or hazardous wastes—such as the Proposed Project—shall meet the requirements set forth in the California Health and Safety Code, Division 20, Chapter 6.95, and the California Code of Regulations, Title 22, Division 4.5.

With the implementation of the HMBP, SPCC Plan and SWPPP, the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; therefore, impacts would be less than significant.

4.4 Growth-Inducing Impacts

CEQA Guidelines Section 15126(e) requires an EIR to discuss how a proposed project "could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment", as well as:

> … the characteristic of some projects which may encourage or facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

4.4.1 Economic Growth

In the short term, the Proposed Project would induce economic growth by introducing temporary employment opportunities associated with the construction of the Project. The peak onsite construction workforce is expected to include 200 individuals, who would likely come from nearby communities such as Huron, Coalinga, Lemoore, Visalia, and other locales within commuting distance to the Project Area. Decommissioning and site restoration are expected to require the same or smaller workforce.

Once construction is completed, the number of staff onsite would range from zero (it is not necessary for staff to be present during operations) to 30 during periodic, routine maintenance events. These workers

would also be expected to commute to the Project Area from local and regional towns and cities, rather than relocate.

4.4.2 Population Growth and Housing

The Proposed Project is located within unincorporated Fresno County, approximately 3 miles south of the City of Huron. The population in unincorporated Fresno County in 2015 was approximately 170,450, and population projections show the population in 2020 to be approximately 101,710. By 2050, the population in the unincorporated areas is expected to grow by 0.4 percent. The Fresno Council of Governments' projections suggest that the population in the County's incorporated and unincorporated areas are expected to follow historical trends of increasing growth in the County's cities compared to the unincorporated areas. The unincorporated areas are projected to have only 7.9 percent of the County's population by 2050 (Fresno County 2023b).

The Project does not include the construction of any new homes or businesses and would not directly induce population growth. The Project would also not induce population growth indirectly from the construction of an access road, internal roads, or from other Project infrastructure because the Project would not be accessible to the public and would not require a workforce during normal operations.

As previously stated, the peak onsite construction workforce is expected to include 200 individuals, who would be onsite at any given time. Most workers would likely commute to the Project Area from nearby communities such as Huron, Coalinga, Lemoore, Visalia, and other locales within commuting distance to the Project Area. The construction of the Proposed Project is expected to last approximately 9 months. During operations, the number of staff onsite may range from zero to 30 individuals during periodic, routine maintenance events. The anticipated operational lifespan of the Project is about 35 years, after which point it would be decommissioned. Decommissioning and site restoration are expected to require the same or smaller workforce as the construction period. Workers would be expected to commute to the Project Area from local and regional towns and cities rather than relocate. Construction, operation, and decommissioning of the Project, therefore, would not require substantial numbers of new homes and would not induce substantial unplanned growth in the area.

4.5 Cumulative Impacts

CEQA Guidelines Section 15130(a) requires an EIR to discuss cumulative impacts "when the project's incremental effect is cumulatively considerable." Cumulatively considerable, as defined in Section 15065(a)(3), means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

Under Section 15130(b), an adequate discussion of significant cumulative impacts should include:

- a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency;
- a summary of projections contained in an adopted local, regional, or statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect.

Any such document shall be referenced and made available to the public at a location specified by the lead agency;

- the nature of each environmental resource, project location, and project type should be considered when determining related projects;
- the lead agency should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation; or
- reasonable, feasible options to mitigate or avoid the project's contribution to any significant cumulative effects.

Table 4-1 summarizes currently planned and probable future projects within approximately 5 miles of the Project Area. According to the Visual Impact Assessment prepared for the Proposed Project, a distance of greater than 5 miles would result in limited visibility of Project elements, and elements would not appear as identifiable features in the landscape setting, resulting in minimal or negligible visual impacts. As such, projects located 5 or more miles from the Project Area are not evaluated in this analysis. This Draft EIR used the list of projects in Table 4-1 for all cumulative impact discussions with the exception of those analyses that require more of a regional analysis, such as air quality.

Table 4-1. Cumulative Projects List

Project No.	Project Name	Location	Description	Project Status	Distance from Project Area
1	San Luis West Solar Project (Proposed Project)	Three subareas south of West Tractor Avenue, west of the California Aqueduct, and east of I-5 on 10 APNs	Construction, operation, maintenance, and decommission of a 125 MW solar PV electric generation facility and 30 MW BESS.	Proposed	—
2	Key Energy Storage Project	Immediately south of West Jayne Avenue on APNs 085-040-58, 085-040-36, and 085-040-37	Construction, operation, maintenance, and decommission of a 3 GW energy storage facility and a new 2,500-foot-long 500-kilovolt transmission line between the site and PG&E's Gates Substation.	Proposed	50 feet
3	22-18-M 2022-2023 Crack Seal Various Locations in Fresno County	Jayne Avenue from SR-33 to Avenal Cutoff Road	178 lane miles of crack sealing, including along Jayne Avenue from SR-33 to Avenal Cutoff Road. Several additive locations are proposed for up to 17 lane miles of crack sealing within County Service Areas.	Completed	50 feet
4	Fifth Standard Solar Project Complex	West of SR-269/South Lassen Avenue and northeast of PG&E Gates Substation on 12 APNs	Construction, operation, maintenance, and decommission a 150 MW solar PV generation facility, an up to 20 MW solar PV generation facility, and an up to 100 MW energy storage facility along with associated infrastructure.	Proposed	60 feet
5	24-06-M Road Preservation Treatments Various Locations in Fresno County	El Dorado – Phelps Ave to Jayne Ave	Placement of chip seal coat on various County roads, including on 2.46 miles of South El Dorado Avenue. The County's Road Maintenance & Operation Division identified roads showing signs of distress, such as alligator, block, longitudinal, and transverse cracking.	Proposed	4.5 miles

Notes: APN = Assessor's Parcel Number; GW = gigawatt; PG&E = Pacific Gas & Electric Company; SR = State Route

Source: Fresno County 2024a, 2025b

4.5.1 Aesthetics

The geographic scope of potential cumulative impacts to the existing visual character or quality of public views includes the viewshed along West Jayne Avenue, I-5, and State Route (SR) 269/South Lassen Avenue, in addition to locations from which a viewer could see the Project Area along with other projects (i.e., where visual impacts could accumulate). Table 4-1 provides the relative distances between the Project Area and other present and reasonably foreseeable future projects that could contribute to cumulative impacts to aesthetics. Cumulative aesthetic impacts could occur if the Project contributes to visual changes to the landscape that are visible or perceived by the public, either within the same viewpoints, or as a noticeable element in a cumulative viewing experience.

As discussed in Section 3.1, no state scenic highways or scenic vistas are located in the vicinity of the Project Area. During construction and operations, the Project, where visible and noticeable, may introduce visual contrast and have the potential to create visual effects within the surrounding areas. Visual changes to the area's scenic views due to construction activities would be temporary and short-term in nature. Completion of the Project would introduce new visual elements into the Project Area; however, these Project components would not be visible from I-5 due to the proposed facility's low profile and intervening vegetation and structures. Decommissioning would include temporary changes due to the removal of all equipment associated with the Project. These visual impacts would be short-term and are not considered to be significant. After the equipment removal activities, the Project Area will be returned to substantially the same condition as prior to development. The Project would not substantially degrade the existing visual character or quality of public views of the Project Area and its surroundings and would result in a less than significant impact.

The proposed solar panels will be oriented closer to a horizontal alignment during most of the day. This allows views through the Project Area, which reduces attention to and contrast from the Project. Additionally, due to the application of anti-reflective coatings, the panels would have an overall low reflectivity and would not cause substantial glare. Existing structures and trees would obscure views (partially or completely) of the Project from the adjacent residences; any visible components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of agricultural lands in the background. Residential viewers would have a moderate sensitivity to the visual changes in the Project Area. Where the views of the Project are not blocked by adjacent orchards, travelers along these roadways would have a short duration of viewing the Project Area and would have a low viewer sensitivity to the visual changes in the Project Area.

Six Key Observation Points (KOPs) were selected as representative vantage points in the landscape with publicly accessible views of the Project Area. The Project Area would not be visible from KOPs 1 and 5; therefore, no impact to the existing visual character or quality of public views would occur. The scenic quality of KOPs 2, 3, 4, and 6, under both existing conditions and post-development of the Project, are identified as low (Class IV). Visual quality would remain in the same visual class and would not result in a change in visual class. None of the views from these KOPs are protected or designated as important or significant scenic resources by the federal, state, or County regulations. The Project would not therefore substantially degrade the existing visual character or quality of public views of the Project Area and its surroundings and would result in a less than significant impact.

Cumulative construction disturbances from nearby planned constructed projects, such as the *Key Energy Storage Project* and *Fifth Standard Solar Project Complex*, could include traffic, temporary staging areas and laydown areas, temporary equipment, and dust from earth moving and exposed soil. Cumulative visual impacts related to operation and maintenance could include nighttime lighting, visual changes to landscapes due to solar facilities, and increases in the level of glare in the area relative to baseline conditions. Decommissioning and restoration activities would contribute similar visual impacts to those identified for construction (ESA 2023; Stantec 2020).

The completed *2022-2023 Crack Seal Various Locations in Fresno County Project* involved sealing approximately 178 lane miles along Jayne Avenue from State Route 33 to Avenal Cutoff Road (Fresno County 2024c). Because this project is complete, no cumulative construction disturbances would occur. Additionally, the sealed roads would not contribute any significant visual changes to the landscape.

The proposed *Road Preservation Treatments Various Locations in Fresno County Project* would involve the placement of chip seal coats on various County roads, including 2.46 miles of South El Dorado Avenue (Fresno County 2024d). Cumulative construction disturbances could include traffic and temporary equipment. Operation of the sealed roads would not contribute to cumulative visual impacts and would not contribute any significant visual changes to the landscape.

4.5.2 Agriculture and Forestry Resources

The geographic scope of potential cumulative impacts related to other changes in the existing environment that could result in conversion of Farmland to nonagricultural use due to their location or nature is Fresno County. Ongoing impacts of past projects to Agriculture Resources, including Farmland, are reflected in the environmental setting described in Section 3.2.2. Table 4-1 lists other projects under County consideration that, if approved and constructed, have the potential to cause impacts that could combine with those of the Project to result in an adverse cumulative impact.

As discussed in Section 3.2, approximately 1,091 acres of the Project Area designated as Prime Farmland would be converted to non-agricultural use for a minimum of 35 years (Tetra Tech 2025a). Construction and operation of the Project would take the Project's acreage out of production; however, it would not adversely affect any of the environmental characteristics of the Project Area that qualify it for mapping as Prime Farmland and would not affect the Project Area's long-term suitability for agricultural use. Impacts related to the conversion of Prime Farmland to non-agricultural use would therefore be less than significant.

The Project Area's zoning of AE-20 (Exclusive Agriculture, 20-acre minimum parcel size) and AE-40 (Exclusive Agriculture, 40-acre minimum parcel size) is consistent with the General Plan land use designations of Agriculture, Irrigated Agriculture, and Westside/Eastside Rangeland. Solar energy facilities are considered a compatible use with a Unclassified Conditional-Use Permit (UCUP).

The Project parcels are subject to Williamson Act Contracts and have been petitioned for cancellation by the landowners as part of the Project. Even if cancellation were not proposed, the Project's proposed energy storage facilities are electric facilities and, therefore, would be compatible with the existing Williamson Act contract pursuant to Government Code Section 51238(a). As of 2016, approximately

1,421,579 acres—about 39 percent of the County's assessed agricultural land—was under some form of Williamson Act Contract with Fresno County. The Project Area represents approximately 0.0001 percent of the State's acreage and only around 0.0007 percent of the contracted area in Fresno County (Tetra Tech 2025a). No conflict with Williamson Act contracted land or farmland conversion would occur, and impacts would be less than significant.

The *2022-2023 Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* do not involve any conversion of farmland; therefore, no cumulative impact to farmland associated with these projects would occur (Fresno County 2024c, 2024d).

The EIR prepared for the *Key Energy Storage Project* found that it would convert 318 acres of Prime Farmland to non-agricultural use during the project's 40-year lifetime. Construction, operation and maintenance, and decommissioning of the project would take the affected acreage out of production for 40 years. However, construction and operation and maintenance of the energy storage use would not adversely affect any of the environmental characteristics of the site that qualify it for mapping as Prime Farmland on the basis of its Storie Index Rating. Soil compaction that would occur during construction and last through the operation and maintenance period would be corrected during decommissioning, resulting in a less-than-significant impact during all phases of the project because it would not affect the project site's long-term suitability for agricultural use (ESA 2023).

The EIR prepared for the *Fifth Standard Solar Project Complex* found that it would convert approximately 1,600 acres of Prime Farmland to a non-agricultural use during the project's 35-year lifetime, unless the term is extended. After decommissioning, the project would implement a reclamation plan that would ensure the conversion of the site back to agricultural uses. The project would be constructed and decommissioned in such a way that the site could be returned to agricultural capability. The EIR determined that this conversion was significant and unavoidable because although the land would be returned to agricultural uses after project decommissioning, the feasibility of the land's successful return to agricultural production is uncertain. The soil quality may change due to non-farming and non-irrigation, the site may not return to pre-project levels without the surface water allocation, and groundwater quality and supply may diminish over the extended period that the site is in non-agricultural use (Stantec 2020).

The Proposed Project, along with the *Key Energy Storage Project* and the *Fifth Standard Solar Project Complex*, would convert a total of 3,318 acres of Prime Farmland to non-agricultural use. Construction and operation of these projects would take the acreage out of production for the lifetimes of each project; however, they would not adversely affect any of the environmental characteristics of the sites that qualify them for mapping as Prime Farmland and would not affect the sites' long-term suitability for agricultural use. Each site would return to agricultural use following decommissioning. For these reasons, the Project's less than significant impact would not be cumulatively considerable.

4.5.3 Air Quality

The geographic scope of potential cumulative impacts to air quality is the San Joaquine Valley Air Basin (SJVAB), which is governed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). Potential cumulative air quality impacts would result if the cumulative projects' pollutant emissions combined to

degrade air quality conditions to below acceptable levels. SJVAPCD also considers cumulative carbon dioxide (CO) impacts to be accounted for in a CO hotspot analysis. As shown previously in Table 3.3-4, the SJVAPCD adopted emissions-based thresholds of significance for construction and operational activities.

Construction emissions for the Proposed Project would not exceed the SJVAPCD significance thresholds for any pollutants, both with and without the Rule 9510 and Dust Control Reductions. Project operational emissions includes potential emissions from worker commutes and heavy trucks used during maintenance. Operational emissions would not exceed the SJVAPCD thresholds, and traffic associated with operations would be negligible and would not result in CO hotspots at intersections.

As discussed in Section 3.3, the Project would result in an increase in short-term emissions related to construction and an increase in long-term operational emissions for those pollutants and precursors (reactive organic gases and nitrogen oxide) for which the SJVAPCD is in nonattainment (ozone and particulate matter). However, the cumulative emissions associated with the Project would not be considerable because the emissions would not exceed any SJVAPCD thresholds. Under this condition, the Project would not make a cumulatively considerable contribution during construction or operations. Additionally, the Project would not conflict with the SJVAPCD attainment plans, which address cumulative emissions in the SJVAB and account for emissions associated with construction activity. As such, the contribution of Project construction and operational emissions to the cumulative air quality impact in the region would be less than significant.

4.5.4 Biological Resources

The geographic scope of potential cumulative impacts to biological resources includes the regional population or corridor for the affected species or community or the extent of the local watershed. Present and reasonably foreseeable future projects that could contribute to cumulative impacts to biological resources include projects with grading, paving, landscaping, road, or building construction of undeveloped land or with habitat otherwise present.

The *Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* would be located within the Right-of-Way (ROW) and would not result in impacts to any undeveloped land or habitat (Fresno County 2024c, 2024d). As such, no cumulative impact to biological resources associated with these projects would occur.

4.5.4.1 Special-Status Species

Burrowing Owl

The Proposed Project would result in potential impacts to special-status wildlife species observed in the Project Area or that have a high or medium potential to occur, including burrowing owl. The Proposed Project would include ground disturbance and construction activities that would result in direct or indirect impacts to burrowing owl. Project impacts to burrowing owl after implementation of recommended mitigation measures would be less than significant. As such, the Project would not contribute to a regional impact on burrowing owl habitat.

The *Key Energy Storage Project EIR* identified in Table 4-1 was determined to contain potential low-quality burrowing or nesting habitat for most species, including the burrowing owl. Nonbreeding- and breeding-season surveys were conducted, and no burrowing owls were observed onsite. No burrows large enough to accommodate burrowing owl were detected, and no burrowing owl sign was observed during the surveys. In the absence of California ground squirrel colonies or other suitable burrows and cover, and given the active agricultural uses over most of the site, the project area was considered marginal and unoccupied habitat for the species (ESA 2023). The *Fifth Standard Solar Project Complex EIR* determined that nesting habitat for burrowing owl was absent onsite and within 250 feet of the site (Stantec 2020). As such, the Project, in combination with all identified cumulative projects, would not result in a cumulatively considerable impact to burrowing owl.

Swainson's Hawk

The Proposed Project would result in potential impacts to special-status wildlife species observed in the Project Area or species that have a high or medium potential to occur, including Swainson's hawk. Project impacts to Swainson's hawk after implementation of recommended mitigation measures would be less than significant. The *Key Energy Storage Project* and *Fifth Standard Solar Project Complex*, as identified in Table 4-1, also have the potential to affect Swainson's hawk.

The *Key Energy Storage Project* identified suitable foraging habitat for Swainson's hawk in the agricultural and fallow portions of the site; however, it is considered low-quality foraging habitat due to the openness and lack of vegetive cover for prey. No documented occurrences of nesting Swainson's hawk were located within 5 miles of the site (ESA 2023). The *Fifth Standard Solar Project Complex* determined that Swainson's hawk potential for nesting habitat was low due to the lack of suitable nesting trees onsite; however, tree rows found offsite may support nesting. The site is tilled and managed to exclude Swainson's hawk forage species (Stantec 2020).

With the implementation of the Project's recommended mitigation measures and due to the low-quality foraging and nesting habitat on the cumulative project's sites, the Project's contribution to impacts to this species would not be cumulatively considerable.

Northern Harrier

The Proposed Project would result in potential impacts to special-status wildlife species observed in the Project Area or that have a high or medium potential to occur, including Northern harrier. The Project Area consists of agricultural land that could be used by this species if fields remained untilled during the nesting season and supported tall vegetation; however, these areas are regularly disced. As such, no nesting habitat for this species is available within the Project Area. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant. Project impacts to Northern harrier after implementation of recommended mitigation measures would be less than significant.

The *Key Energy Storage Project* determined that no suitable nesting habitat for Northern harrier occurs onsite, but marginally suitable foraging habitat for the species is present in disced fields onsite. Despite the active agricultural operation, portions of the site provide habitat for prey, including gophers and other

rodents. Conversion of these lands would reduce the amount of available foraging habitat and could cause raptors to range farther from their nests for prey. However, because of the large amount of suitable foraging habitat in the vicinity of the site, the impact of the loss of approximately 260 acres of foraging raptor habitat would be less than significant (ESA 2023). The *Fifth Standard Solar Project Complex* did not identify Northern harrier as a potentially affected species (Stantec 2020).

Agricultural lands similar to those present in the Project Area exist in its vicinity, and the combined loss of foraging habitat from the Project and cumulative projects is not expected to be significant. As such, the Project, in combination with all identified cumulative projects, would not result in a cumulatively considerable impact to Northern harrier.

California Horned Lark

The Proposed Project would result in potential impacts to special-status wildlife species observed in the Project Area or that have a high or medium potential to occur, including California horned lark. This species was observed foraging in the Biological Study Area (BSA) during the Project's biological surveys, and the disced fields in the BSA provide nesting habitat for this species. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant. Additionally, implementation of the recommended mitigation measures would reduce the potential impacts to less than significant.

The *Key Energy Storage Project* did not identify California horned lark as a potentially affected species (ESA 2023). The *Fifth Standard Solar Project Complex* identified foraging habitat for California horned lark onsite and a low potential for breeding habitat. Horned lark foraging was observed in harvested wheat fields; however, nesting is not expected due to ongoing, active cultivation across the entire site. This species is not expected to nest onsite, and no impacts are anticipated to nesting California horned larks (Stantec 2020).

Given the Project's less-than-significant impact to California horned lark and the lack of impacts anticipated from the cumulative projects listed in Table 4-1, the Project's contribution to impacts to this species would not be cumulatively considerable.

Merlin

The Proposed Project would result in potential impacts to special-status wildlife species observed in the Project Area or that have a high or medium potential to occur, including merlin. This species could forage and roost in the Project Area; however, merlin does not breed in California. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant. Additionally, implementation of the recommended mitigation measures would reduce the potential impacts to less than significant.

The *Key Energy Storage Project* and *Fifth Standard Solar Project Complex* did not identify merlin as a potentially affected species (ESA 2023; Stantec 2020); therefore, no cumulative impact to this species would occur.

Loggerhead Shrike

The Proposed Project would result in potential impacts to special-status wildlife species observed in the Project Area or that have a high or medium potential to occur, including loggerhead shrike. Loggerhead shrike was observed within 2 miles of the Project Area, and the Project Area contains foraging and nesting habitat for this species. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant. Additionally, implementation of the recommended mitigation measures would reduce potential impacts to less than significant.

The *Key Energy Storage Project EIR* states that loggerhead shrike nesting may occur within the onsite orchard and within Russian thistle shrubs in the fallow agricultural fields in the northern and southern portions of the site. Suitable foraging habitat for this species is present within the open agricultural fields. However, this species was not observed onsite during field surveys, and the closest reported occurrence is 3.6 miles southeast of the site. Implementation of mitigation measures to protect special-status species, implement worker environmental awareness training and BMPs for biological resources, and protection of nesting birds would reduce impacts to less than significant (ESA 2023). The *Fifth Standard Solar Project Complex EIR* did not identify Northern harrier as a potentially affected species (Stantec 2020).

Agricultural lands similar to those present within the Project Area exist its vicinity, and the combined loss of foraging habitat from the Project and cumulative projects is not expected to be significant; therefore, the Project, in combination with all identified cumulative projects, would not result in a cumulatively considerable impact to loggerhead shrike.

San Joaquin Kit Fox

San Joaquin kit fox was determined to have a medium potential to occur within the Project Area. The soils within the Project Area are heavily disturbed by agricultural practices but may provide foraging habitat for San Joaquin kit fox. No San Joaquin kit fox or their sign were observed during the 2023 and 2024 surveys, and most culverts and pipes present in the BSA that could serve as potential habitat were used for irrigation and were partially buried in mud. Due to active irrigation in the BSA and the lack of dens observed, San Joaquin kit fox burrows are unlikely to be established prior to Project implementation. The Project Area has potential for San Joaquin kit fox to forage onsite because dens have been previously recorded within 2 miles of the Project Area. Direct impacts to this species could include loss of habitat and potential dens due to construction activities. Suitable habitat would remain surrounding the Project Area; therefore, the loss of habitat onsite is not expected to be significant. Additionally, implementation of the recommended mitigation measures would reduce the potential impacts to less than significant.

The *Key Energy Storage Project EIR* states that the site has a low potential for San Joaquin kit fox to use the site for foraging and dispersal; however, lack of cover may discourage kit foxes from crossing the site. The intensive agricultural activities, minimal sign of prey species, and presence of coyotes onsite substantially reduce the site's habitat value, and kit foxes are not expected to use the site for breeding. No San Joaquin kit foxes, suitable dens, or sign were observed during field surveys. The site is surrounded by other agricultural lands, which have the potential to support residency or movement by kit foxes. As such, the San Joaquin kit fox could occur onsite sporadically. Implementation of mitigation measures including pre-

construction clearance surveys and installation of fencing would reduce impacts to this species to less than significant.

The *Fifth Standard Solar Project Complex EIR* found that the project site was almost entirely devoid of kit fox forage species and lacked any burrows where kit foxes could take cover from predators. However, the proposed future use of the site for solar facilities would be more benign than current uses relative to kit fox suitability. The project may benefit this species through the elimination of active cultivation, which would likely allow the future use of the site by prey species and would also provide undisturbed habitat where kit foxes could reside. Given the existing agricultural site uses, the San Joaquin kit fox is not expected onsite, and no impacts are expected to this species.

Given the low potential for occurrence of San Joaquin kit fox within the Project Area and on the sites of the aforementioned cumulative projects, habitat loss is not expected to be significant. Additionally, the conversion of the sites from active agriculture to solar facilities use may provide a moderately beneficial impact to the species. The Project, in combination with all identified cumulative projects, would not result in a cumulatively considerable impact to San Joaquin kit fox.

Migratory Birds

Impacts to migratory birds may occur during Project operations and maintenance from collisions with Project facilities and equipment, including power lines, fencing, and solar arrays. The Project Area, however, will consist of low-height photovoltaic arrays, which represent a much lower collision risk compared to other types of renewable energy facilities such as wind turbines, and only minimal lighting would be used onsite to avoid attracting migratory bird species. Implementation of the recommended mitigation measures would reduce the potential impacts to less than significant. Because of these factors, the incremental effects of the Project on overall avian fatality from collision risk in the Central Valley would not be cumulatively considerable.

Wildlife Corridors

Development of the Project, including fencing installation and activities associated with construction and operations/maintenance, could potentially interfere with the movement of wildlife within, through, or adjacent to the Project Area. The Project Area, however, does not contain or function as a wildlife movement corridor because it is heavily disturbed by agriculture, which has removed native habitat and limits opportunities for habitat continuity and wildlife movement. It does not contain wildlife travel routes or wildlife crossings that connect open space areas, provide connectivity between large areas of open space on a local or regional scale, or contain suitable cover or forage to attract or support wildlife species. The Project Area is therefore unlikely to provide a significant movement corridor for wildlife species. There is no existing significant cumulative impact on wildlife movement, and the incremental impacts of the Project, in combination with the cumulative projects listed in Table 4-1, would not cause one.

Wetlands

Five soft-bottom agricultural retention basins (W-1, W-2, W-3, W-4, and W-5) were identified within the Project Area. None of the isolated features are jurisdictional to the U.S. Army Corps of Engineers (USACE)

because they do not connect to traditional navigable waters; they are artificial ponds used for agricultural irrigation that are exempt from jurisdiction. Features W1 through W5 are exempt from USACE Section 404 and Regional Water Quality Control Board jurisdiction. Features W1 through W5 have defined bed and banks and are basins/ponds. Because California Department of Fish and Wildlife (CDFW) does not differentiate lakes from smaller ponds, these basins are jurisdictional to CDFW. A Lake and Streambed Alteration Agreement from the CDFW would be obtained if these areas cannot be avoided and would be affected by the Project.

The *Key Energy Storage Project EIR* did not identify any state or federally protected wetlands onsite (ESA 2023). The *Fifth Standard Solar Project Complex EIR* identified four potentially jurisdictional aquatic features onsite; however, upon further review, the features did not appear to have connectivity to any natural water features and were direct results of the agricultural use of the project site and surrounding fields. These features therefore do not meet the qualifications for jurisdictional features.

The Project, in combination with all identified cumulative projects, would not result in a cumulatively considerable impact to wetlands.

4.5.5 Cultural Resources

The geographic scope of potential cumulative impacts to cultural resources is a 1-mile radius around the Project Area. The cultural resources within this radius are expected to be similar to those that occur in the Project Area due to their proximity, similar environments, landforms, and hydrology, which are expected to have resulted in similar land-use practices over time. The temporal scope for cumulative impacts to cultural resources would be the duration of the Project's ground-disturbing activities.

As discussed in Section 3.5, the results of the California Historical Resources Information System records searches indicate that seven previous cultural resources studies have been conducted within the Project Area. Additionally, the record search and cultural resources pedestrian survey identified the presence of one previously recorded cultural resource (P-10-006640) in the northwestern portion of the Project Area, outside of the area of direct impact. Resource P-10-006640 is not eligible for listing to the California Register of Historical Resources (CRHR) and does not qualify as a Historical Resource, as defined in CEQA Guidelines Section 15064.5.

Subsurface deposits across the Project Area consist of late Holocene (approximately 4,000 to 150 years before present) alluvium fan deposits, which are generally considered to have the potential to contain buried archaeological resources depending upon the likelihood of past human activity in the area. The Project Area has an overall low sensitivity for buried subsurface archaeological resources that qualify as historical resources; however, because the Proposed Project includes subsurface excavation up to depths of approximately 10 feet, the possibility remains that unknown subsurface cultural resources that qualify as historical resources could be encountered. As such, impacts to unknown cultural resources that could qualify as significant historical resources would be mitigated to less than significant through the implementation of the recommended mitigation measures that require cultural resources sensitivity training for construction workers, archaeological and Native American monitoring during construction, and appropriate treatment of unearthed archaeological resources during construction.

The *Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* would be located within the ROW and would involve sealing and preserving existing roads (Fresno County 2024c, 2024d). Initial construction of these roads would have disturbed any existing cultural resources, and the addition of seal coats would not involve activities that could uncover undiscovered cultural resources. As such, no cumulative impact to cultural resources associated with these projects would occur.

The *Key Energy Storage Project EIR* notes that the site has low sensitivity for buried archeological resources based on its geomorphology, proximity to water, and landform slope; however, Holocene alluvial deposits are located in the general vicinity, which could have buried resources that may be encountered during ground-disturbing activities. Impacts would be reduced to less than significant with the implementation of mitigation measures that require the retention of a qualified archaeologist and cultural resources awareness training as well as outline procedures in the event of inadvertent discovery of archaeological materials (ESA 2023).

The *Fifth Standard Solar Project Complex EIR* identified one cultural resource located on the project site but outside of the area of direct impact. The cultural resource has been recommended as not historically significant under the CRHR and National Register of Historic Places (NRHP) criteria and is considered not eligible for inclusion in the CRHR and NRHP. Despite the low potential for a historical resource to be present at the project site, the inadvertent discovery of a historical resource cannot be entirely discounted. Impacts would be reduced to less than significant with the implementation of mitigation measures that involve retaining a qualified project archaeologist to coordinate cultural mitigation and outline a protocol for inadvertent discovery of a cultural resource (Stantec 2020).

The Proposed Project, along with the aforementioned cumulative projects, all have low sensitivities for cultural resources; they also provide mitigation measures that require halting project-related activities and creating a buffer around incidental cultural resource discoveries. With implementation of the mitigation measures recommended at the Project-specific level, the Project would cause a less-than-significant cumulative contribution to a potential significant cumulative impact to cultural resources.

4.5.6 Energy

Sources of energy that are relevant to the Proposed Project include electricity, the equipment-fuel necessary for Project construction and decommissioning, and the automotive fuel necessary for Project operations. The geographic scope for potential cumulative impacts related to electricity is PG&E's service area. The geographic scope for equipment and vehicle fuel use is within the Project's construction equipment delivery and workers' average travel radius (assumed to be up to 152 miles for vendors and approximately 50 miles for workers) because these are the areas within which energy resources would be demanded and supplied for the Project.

Construction and decommissioning of the new solar energy generation facility is expected to require the use of non-renewable resources such as gasoline and diesel to power off-road construction equipment and on-road vehicles, and electricity consumed from water pumping during construction. The Proposed Project would comply with state measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation and construction fuels. Although these

regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines.

Operational energy consumption in the form of electricity use would occur as a result of operation of the facilities and substation, operation of the BESS, solar panel maintenance, and pumping of groundwater. The proposed solar panels, however, would generate up to 171,500,000 kWh of electricity annually and offset onsite operational electricity use. This electricity generation would assist state investor-owned utilities in meeting their obligations under State Renewable Portfolio Standards guidelines by providing a renewable energy alternative to the utilities' existing power mix. In addition, transportation fuel use would be minimal and is predominately associated with worker commute trips, trucks, off-road equipment, and panel washing activities. Trips to the Project Area would be minimal, and panel cleaning would happen periodically.

Because the Project overall would have a beneficial cumulative impact on electrical resources, it would not result in a cumulatively considerable contribution to any adverse significant impact in this regard.

4.5.7 Geology and Soils

The geographic scope for potential cumulative impacts related to geology and soils consists of the Project Area and adjacent areas because these impacts tend to be site-specific and depend on local geology and soil conditions.

Construction activities would result in the disturbance of an area greater than 1 acre and would temporarily increase erosion, runoff, and sedimentation. The Project Proponent would be required to obtain and comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, and implement dust control measures, which would include construction BMPs to control and limit sedimentation and erosion.

The region is subject to strong, seismically induced ground shaking; however, the likelihood of Project construction having offsite geologic impacts is very low due to its limited excavation work. The Proposed Project would also be subject to all appliable ordinances of the Fresno County Department of Public Works and Planning and would adhere to the geotechnical and seismic design criteria required for construction in accordance with the California Building Code. Adherence to all applicable regulations would mitigate any potential fault rupture-related impacts associated with the Proposed Project.

Simultaneous construction of the Proposed Project and other related projects could result in cumulative soil instability-related impacts such as soil erosion, landslides, and soil collapse from the cumulative loss of vegetation or ground-disturbing activities related to the construction phase of the Proposed Project. The *Key Energy Storage Project* and *Fifth Standard Solar Project Complex* are planned in the immediate vicinity of the Proposed Project, and the construction phases of these projects could overlap with construction of the Project. The project sites are subject to similar levels of geologic and seismic hazards such as ground shaking, liquefaction, and slope failures and would all be required to comply with the geotechnical and seismic design criteria required for construction in accordance with the CBC. As such, cumulative impacts related to construction of the Project and related projects would be less than significant, and the contribution from the Project would not be cumulatively considerable.

The geologic unit found at the surface of the Project Area is characterized as Holocene-age surficial sediments (Quaternary alluvium) and underlain by Pleistocene-age sediments (consolidated Pliocene and/or Pleistocene sedimentary rocks) estimated at a depth of no less than 15 feet below the ground surface. Based on the likelihood of finding paleontological resources in each unit, the Holocene-age unit was judged to have low paleontological potential, whereas the Pleistocene-age unit was judged to have undetermined paleontological potential. Paleontological resources could be encountered (though unlikely) if excavations exceed a depth of 15 feet below the ground surface within the Project Area. This could result in potentially significant impact if paleontological resources are encountered and inadvertently destroyed during ground-disturbing activities. As stated above, construction of the *Key Energy Storage Project* and *Fifth Standard Solar Project Complex* could overlap with construction of the Proposed Project. If paleontological resources extend across areas of ground disturbance between the Proposed Project and the cumulative projects, the projects could result in the loss of paleontological resources. However, implementation of the Project's mitigation measures and the mitigation measures outlined in the cumulative projects' EIRs would address the inadvertent discovery of paleontological resources. As such, although implementation of cumulative projects could have significant effects related to paleontological resources, the Project's contribution to such effects would be less than significant.

4.5.8 Greenhouse Gas Emissions

From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative. The SJVAPCD found that the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climate change could be deemed cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

Projects that implement any combination of best performance standards or that demonstrate a total of 29 percent reduction in GHG emissions from business-as-usual would be determined to have a less than significant individual and cumulative impact on global climate change (SJVAPCD 2015a).

The Proposed Project would generate a maximum of 125 MW of electricity at any one time, which would serve to displace GHG emissions and, therefore, assist in the attainment of the State's goal to reduce GHG emissions. As such, operation of the Proposed Project would result in a substantial net reduction in GHG emissions, even when accounting for the minimal operational GHG emissions of the Proposed Project from a small number of periodic maintenance and vehicle trips. The Project-specific incremental impact relative to GHG emissions, therefore, would not be cumulatively considerable; the cumulative impact would be less than significant.

4.5.9 Hazards and Hazardous Materials

The geographic scope for potential cumulative impacts related to hazards and hazardous materials includes the Project Area, a 0.25-mile radius around the Project Area, and nearby roadways that could be used to transport hazardous materials for the Project. A 0.25-mile radius is used because hazards and exposure risks related to hazards and hazardous materials are typically localized in nature due to their

tendency to be related to isolated events and onsite existing hazardous conditions and/or hazards caused by a project's construction or operation.

As discussed in Section 3.9, the Project would not result in impacts related to hazardous emissions or handling of hazardous substances or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; the location of the Project on a listed hazardous materials site; airport-related hazards; or impairment of the implementation of a physical interference with an adopted emergency response plan or emergency evacuation plan. As such, the Project would not cause or contribute to any cumulative effect regarding any of these criteria.

Three of the cumulative projects listed in Table 4-1 are located within 0.25 mile of the Project Area: *the Key Energy Storage Project, 2022-2023 Crack Seal Various Locations in Fresno County Project,* and *Fifth Standard Solar Project Complex*.

Diesel and gasoline fuels and other hazardous materials such as oils, solvents, hydraulic fluids, and paints commonly associated with construction equipment may be stored onsite during Project construction. These materials would be stored and handled in a manner to prevent accidental release and consistent with the hazardous materials handling BMPs and other measures contained within the required SWPPP, which would require them to be stored within locked, aboveground containers with secondary containment. Project O&M activities may involve the transportation, use, or temporary storage of a variety of hazardous materials, such as batteries, hydraulic fluid, diesel fuel, insulation oil for the transformers, grease, lubricants, paints, solvents, and adhesives. Additionally, limited amounts of hazardous materials would be stored or used onsite during Project operation. Appropriate spill containment and cleanup kits would be maintained during Project operation. Any hazardous materials that would be stored onsite would be contained in designated areas in accordance with an HMBP. In general, accidental releases and upset conditions tend to be localized events that do not combine with other projects due to the randomized and infrequent nature of occurrences, and because compliance with applicable laws and regulations governing the transport, storage and use of hazardous materials would assure that any accidental releases would be prevented or contained promptly. The Project's incremental, less-than-significant impact, therefore, would not combine with the incremental impacts of other projects in the cumulative scenario to cause a significant cumulative impact from accidental releases or discovery of hazardous materials and/or wastes.

During the Project decommissioning and site-restoration process, all aboveground equipment would be de-energized, removed, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment offsite. All remaining oil and lubricants removed from equipment would be transferred to an appropriate container and disposed of in accordance with the manufacturers' specifications and consistent with applicable regulatory requirements. Implementation of the BMPs required by the NPDES Construction General Permit would include containment and spill response measures. All cumulative projects would also be required to comply with applicable regulatory requirements, and it is assumed that these projects would also implement similar BMPs and spill prevention and containment measures. This would further reduce the impact to a level that would not cause or contribute to any significant cumulative effect.

4.5.10 Hydrology and Water Quality

The geographic scope for potential cumulative impacts related to hydrology and water quality includes the Project Area and any waterways, watersheds, and aquifers potentially affected by the Project's construction, operations, or decommissioning. The temporal scope of construction-related cumulative effects is the construction period of approximately 9 months, the operation and maintenance period of 35 years (i.e., the life expectancy of the Project), and the decommissioning period of approximately 12 months.

As discussed in Section 3.10, the Project would not result in impacts related to being located in a tsunami or seiche zone, nor would it conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. As such, the Project would not cause or contribute to any cumulative impact regarding these impacts.

4.5.10.1 Water Quality

Construction would involve the use of heavy equipment for vegetation removal, grading, and installation of roads and other facilities. These activities could cause erosion, generate runoff, or involve the accidental release of pollutants which would degrade water quality. After the useful life of the Project is completed, decommissioning of the facility would result in similar potential impacts as those described for construction, including the potential for erosion, sedimentation, and the release of pollutants. Compliance with General Construction Permit implementation requirements, including the preparation and implementation of a SWPPP, SPCC Plan, and associated BMPs, would reduce the temporary water quality impacts to a less-than-significant level.

During Project operations, the implemented stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches would maintain or improve the existing runoff conditions in the Project Area. Any hazardous materials stored onsite during Project operations would be contained in designated areas in accordance with an HMBP, which would ensure that all handling, storage, and disposal of hazardous materials would be conducted in accordance with proven practices to prevent accidental release. For these reasons, the impacts to water quality during O&M would be temporary and less than significant.

The *Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* would require dewatering or discharging accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities. This water would be discharged within project limits and would be discharged such that it would not cause erosion, scour, or sedimentary deposits that could affect natural bedding materials. These projects would implement SWPPPs, Water Pollution Control Programs, and BMPs to prevent, control, and abate water pollution (Fresno County 2024c, 2024d).

The construction activities described in the *Key Energy Storage Project* and *Fifth Standard Solar Project Complex EIRs* are similar to that of the Proposed Project and would involve the use of heavy machinery for vegetation grubbing, grading, and installation of roads and other facilities. These projects include the construction of bioswales or detention basins to capture and treat stormwater, preventing impacts to water quality. The projects would each prepare and implement a SWPPP and associated BMPs, and would

use good housekeeping measures to capture and pretreat stormwater onsite and effectively control runoff (ESA 2023; Stantec 2020).

As described above, the cumulative projects would be required to prepare and implement a SWPPP and implement similar BMPs. These projects would be subject to the same water quality standards or waste discharge requirements. When considered in combination with the effects of other projects, the Project's incremental contribution to potential significant cumulative effect would not be cumulatively considerable.

4.5.10.2 Groundwater Supply

The Project's water demand would be met from two wells that pump groundwater from the Westside Subbasin. Groundwater produced from these wells is subject to the requirements of the Groundwater Sustainability Plan (GSP). The GSP proposes several management actions to improve Westside Subbasin conditions and return to a sustainable use level while concurrently improving aquifer storage and recovery. One of these actions is to implement an allocation system that slowly reduces allowable pumping volumes over time to return to a sustainable yield. The Proposed Project's water needs will be within the allocation cap for the three acquired parcels of land. The Project would also eliminate the use of over 23,700 acre-feet (AF) of groundwater because the current agricultural uses of the Project Area would end when construction begins.

The *Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* would not require groundwater pumping; therefore, no cumulative impact to groundwater associated with these projects would occur (Fresno County 2024c, 2024d).

The *Key Energy Storage Project* and *Fifth Standard Solar Project Complex EIRs* determined that the water demand for each project would be less than significant and would be less than the water demand under existing irrigated agricultural conditions. The projects would therefore not substantially deplete groundwater resources; they would not result in any cumulatively considerable direct or indirect impacts (ESA 2023; Stantec 2020).

Additionally, any groundwater pumping activities in the Westside Subbasin required for the cumulative projects listed in Table 4-1 would also be required to comply with the water allocation caps to ensure sufficient groundwater supplies would be available. As such, the Proposed Project would not combine with other related projects to contribute a cumulative impact.

4.5.11 Land Use and Planning

The geographic scope for potential cumulative impacts related to land use and planning is the immediate Project vicinity.

As discussed in Section 3.11, the Project would not result in impacts related to physically dividing an established community; therefore, the Project would not cause or contribute to any cumulative impact regarding this criterion.

The Project parcels and all easement parcels are zoned Exclusive Agriculture (AE) in accordance with Fresno County's Zoning Classification. Fresno County permits utility-scale solar energy uses with a UCUP within AE zoning districts. Compliance with the conditions of approval for the UCUP would align the Proposed Project with the County's land use regulations and would not constitute a significant environmental impact.

The Project would convert a large acreage of actively farmed Prime Farmland to a solar facility; therefore, it is not consistent with General Plan Goal LU-A and the policies related to it. Land use policy LU-A.12, however, states that the County shall support and promote the use of renewable energy resources and technologies, such as solar energy, in appropriate locations within agricultural areas to ensure compatibility with agricultural operations. Impacts related to conflicts with the County's General Plan land use policies would be less than significant.

The Project would also adhere to the policies for solar project developments as set forth in the County's Solar Facility Guidelines. The Proposed Project is designed with a buffer between the solar facility and adjacent agricultural fields. In compliance with the Solar Facility Guidelines, the Applicant will acknowledge the County's Right to Farm Ordinance and will record a Right to Farm Notice. To facilitate a possible return to agricultural uses after the life span of the Project, a reclamation plan has been prepared detailing the removal of Project improvements and specific measures to return the site to its condition prior to construction.

The *Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* would be located within the ROW of existing roads. These projects would comply with the County General Plan's transportation and circulation goals concerning roadway improvements (Fresno County 2024c, 2024d). As such, no cumulative impact to land use and planning impacts associated with these projects would occur.

Similar to the Proposed Project, the *Key Energy Storage Project* and *Fifth Standard Solar Project Complex EIRs* identified that each project would be consistent with County land use and zoning designations with the approval of an UCUP for the energy storage and solar uses respectively. Both of these projects are also subject to compliance with the County's Solar Facility Guidelines and would maintain a buffer between the BESS/solar facility and adjacent agricultural operations (ESA 2023; Stantec 2020).

As described above, the projects listed in Table 4-1 would also be subject to the County's land use and zoning policies and must be consistent prior to development. The Project, in combination with the cumulative projects, would not have cumulatively significant impacts.

4.5.12 Mineral Resources

As discussed in Section 3.12, the Project would not result in impacts related to the loss of availability of a known mineral resource of value to the region or the loss of availability of a locally important mineral resource recovery site. The Project, therefore, would not cause or contribute to any cumulative impact.

4.5.13 Noise

The geographic scope considered for potential cumulative impacts related to noise is the area within 1 mile of the Project Area because sounds naturally attenuate with distance and topography. The temporal scope for cumulative noise impacts is during the construction, operation, and decommissioning phases of the Project.

As discussed in Section 3.13, the Project would not result in impacts related to the Project exposing residents or workers within 2 miles of a public airport to excessive noise levels; therefore, the Project would not cause or contribute to any cumulative impact regarding this criterion.

The *2022-2023 Crack Seal Various Locations in Fresno County Project* (Table 4-1) has already been completed and is operating within this geographic scope; this road-sealing project would not increase the existing noise setting. The *Key Energy Storage Project* and *Fifth Standard Solar Project Complex* are located within 1 mile of the Project Area and could have overlapping construction timelines with the Project. As such, noise from construction, operation, or decommissioning of the Project could combine with noise from these other two projects to cause additional increases in maximum noise levels generated by the Project.

4.5.13.1 Construction and Decommissioning

Based on sound propagation calculations, Project construction sound levels are predicted to range from 48 to 56 A-weighted decibels (dBA) at NSA-1 and NSA-2. The NSAs are located approximately 1 mile north of the Project Area and 1 mile east of the Project Area. The Federal Transit Administration has published construction noise impact criteria levels of an 80 dBA 8-hour L_{eq} for the day and a 70 dBA 8-hour L_{eq} for the night for residential land uses. The maximum construction noise level at the nearest receptor would be below the threshold for construction noise. Construction noise was modeled on a worst-case basis, and it is very unlikely that all pieces of construction equipment would be operating at the same time for the various phases of Project construction as well as at the point closest to the nearest NSA. Furthermore, construction-related noise would be temporary and would cease upon Project completion. Decommissioning activities would include the use of similar equipment because construction and would similarly not significantly affect nearby sensitive receptors.

The *Key Energy Storage Project* is located approximately 50 feet west of the Project Area, specifically Subarea A. The EIR prepared for the project identifies the nearest noise-sensitive users to be agricultural residences located 3,300 feet to the west, along West Jayne Avenue. The analysis did not include receptors NSA-1 and NSA-2 as the closest receptors because they are respectively located more than 2.5 and 4.8 miles from the closest point of the *Key Energy Storage Project*. At these distances, construction noise levels from the *Key Energy Storage Project* are not expected to be audible. In addition, similar to the Project, the *Key Energy Storage Project* would be expected to implement mitigation measures designed to reduce noise impacts as recommended in the EIR for that project (ESA 2023). As such, the contribution of construction noise would not be cumulatively considerable if both projects were constructed simultaneously, and the cumulative impact would be less than significant.

The *Fifth Standard Solar Project Complex* is located approximately 60 feet away from the Project Area, specifically Subarea C. The maximum construction noise levels at the nearest sensitive receptor would be 54 dBA. The EIR prepared for the project identifies the nearest noise-sensitive users to be five residences located approximately 1,100 feet east of the eastern edge of the site, on West Tractor Avenue. These residences are the same as identified in the Proposed Project as NSA-1. The *Fifth Standard Solar Project Complex* would be located 0.25 mile from NSA-1, which is closer than the Proposed Project 1 mile to the south. Given the logarithmic nature of the loudness of sound, combining the Proposed Project's 56 dBA construction noise level with a noise level of 54 dBA does not increase the combined noise level above 56 dBA.

Additionally, each of the cumulative projects would be required to comply with the applicable construction noise limitations to ensure that the contribution to cumulative noise impacts during construction would be less than significant. Consequently, significant cumulative nighttime construction noise impacts for the Project in consideration with either the *Key Energy Storage Project* or the *Fifth Standard Solar Project Complex* would not occur; , and the Project alone would not cause cumulative nighttime construction noise impacts

4.5.13.2 Operation

The primary noise sources during Project operations are the inverters; substation transformer; battery storage's heating, ventilation, and air conditioning units; and battery storage inverters. The received sound level for full Project operations at the closest residential receptors (NSA-1 and NSA-2) will be 25 dBA. This operational noise level would comply with the Fresno County Noise Control Ordinance and the Noise Element and would not be higher than current ambient noise levels.

The *Key Energy Storage Project EIR* identified that long-term operational point sources of noise would include battery or electrolyzer tank storage containers, transformers, and a substation. At the nearest receptors, modeled exterior noise levels would range from 17 dBA L_{eq} to 37 dBA L_{eq}. The project would also comply with the Fresno County Noise Control Ordinance's daytime and nighttime threshold limits of 50 dBA and 45 dBA, respectively. As a result, operational noise impacts would be less than significant. Given the distance of the *Key Energy Storage Project* to either of the Proposed Project's NSAs, operational noise levels from the project are not expected to be audible.

The *Fifth Standard Solar Project Complex EIR* identified that operational noise from its transformers, inverters, motors, gen-tie lines, and substation would be as high as 45 dBA at the nearest receptor (1,100 feet). As stated above, this is the same receptor as the Proposed Project's NSA-1. This estimated noise level would not exceed the County's exterior sound limit threshold. Given the logarithmic nature of dBAs, combining the Proposed Project's 25 dBA operational noise level with a noise level of 45 dBA would not increase the combined noise level at the nearest receptor. As such, the Project's operational noise impact would not cause or contribute to a significant cumulative impact with respect to the *Fifth Standard Solar Project Complex*, and its operational cumulative noise impact would be less than significant.

4.5.13.3 Vibration

The only significant source of vibration resulting from the Project would occur during construction. Project construction vibration levels are predicted to be 0.000007 peak particle velocity inch/sec (24 VdB) at the nearest NSA, which is below the minimum vibration level for human perception of 65 VdB. After construction is completed, the Project is not expected to have any significant operational vibration. The Project as a whole is considered to have a less-than-significant impact to excessive ground-borne vibration or ground-borne noise levels.

Vibration impacts from even the highest vibration-generating construction equipment are generally felt only within 100 feet of the equipment and attenuate rapidly with distance; therefore, other projects in the vicinity would contribute to the cumulative vibration impact at a receptor if they were located within a 100-feet radius of a receptor. No cumulative projects are proposed within this distance of Project receptors. Because of the distance of the other cumulative projects from receptors nearest to the Project, the receptors nearest the Project would be sufficiently distant to avoid any cumulative impacts from construction-related vibration. As such, cumulative vibration impacts would be less than significant.

4.5.14 Population and Housing

The geographic scope considered for potential cumulative impacts related to population and housing are cities and unincorporated communities in Fresno County within the vicinity of the Proposed Project. The temporal scope for cumulative noise impacts is during the construction, operation, and decommissioning phases of the Project.

As discussed in Section 3.14, the Project would not result in impacts related to the potential displacement of people or existing housing; therefore, the Project would not cause or contribute to any cumulative impact regarding this criterion.

The peak onsite construction workforce is expected to include 200 individuals who will be onsite at any given time during the construction period. Most workers would likely commute to the site from nearby communities such as Huron, Coalinga, Lemoore, Visalia and other locales within commuting distance to the Project Area. After construction is completed, the number of staff onsite may range from zero (it is not necessary for staff to be present during plant operations) to 30 during periodic, routine maintenance events. Workers would be expected to commute to the Project Area from local and regional towns and cities rather than relocate.

Solar PV projects generally do not induce substantial population growth because they do not create substantial numbers of permanent jobs; therefore, the incremental impacts of the Project, in combination with other projects in the cumulative scenario (even if construction in the immediate area were to occur simultaneously), would not induce substantial in-migration or unplanned population growth. As such, the Project would not cause or contribute to a significant, adverse, cumulative impact relating to potential inducement of population growth.

4.5.15 Public Services

The geographic scope considered for potential cumulative impacts related to public services is the Project vicinity. The temporal scope for cumulative noise impacts is during the construction, operation, and decommissioning phases of the Project.

As discussed in Section 3.14, construction, operation, and decommissioning of the Proposed Project would not result in the need for new or physically altered fire or police protection, school, medical, or other public service facilities in order to maintain acceptable service ratios, response times, or other performance objectives.

During construction of the cumulative projects listed in Table 4-1, construction workers would be onsite. The increase in people could incrementally increase the need for fire, police, or medical services in the case of an emergency; however, the likelihood of simultaneous emergencies at multiple construction sites that would decrease public service resources is low. No new or physically altered public facilities would be required for the cumulative projects because the increase in construction workers would be temporary and the projects would not cause a permanent increase in population. As such, cumulative impacts would be less than significant, and the contribution from the proposed project would not be cumulatively considerable.

4.5.16 Recreation

As discussed in Section 3.16, the Project would not result in impacts related to the potential physical deterioration of existing neighborhood and regional parks or other recreational facilities due to an increase in use or the construction or expansion of recreational facilities as part of the Project; therefore, the Project would not cause or contribute to any cumulative impact.

4.5.17 Transportation

The geographic scope considered for potential cumulative impacts related to transportation includes each of the roads and roadway segments that could be affected by the Project (e.g., I-5, SR-269/Lassen Avenue, West Jayne Avenue, West Phelps Avenue, South Madera Avenue, and West Tractor Avenue).

As discussed in Section 3.17, the Project would not result in impacts related to the potential substantial increase in hazards due to a geometric design feature or incompatible uses; therefore, the Project would not cause or contribute to any cumulative impact regarding this criterion.

With respect to CEQA Guidelines Section 15064.3, the measure of Vehicle Miles Traveled (VMT) is by nature a cumulative measure, in that the travel demand modeling tool used by the County to calculate VMT includes all reasonably foreseeable cumulative development. Construction of the Project would result in a total of 3,378,210 VMT. Assuming that four workers would visit the Project Area from the City of Fresno every 2 weeks, a maximum of 5,512 VMT per year during operations is estimated. Over the estimated 35-year period, the total VMT for operations is likely less than 192,920 miles. At the end of the Project's life, decommissioning would generate trips and miles traveled very similar to that of construction. The Project is a solar and BESS facility, and the primary goal of constructing solar facilities is the reduction of dependence on GHG-emitting fossil fuel energy sources. The Project would provide clean

renewable energy for approximately 35 years after completion. The development of the Project would support the goals of CEQA and the FCOG with regard to diversifying land use and reducing GHG emissions. As such, the Project will have a less-than-significant impact to transportation in Fresno County.

The *Crack Seal Various Locations in Fresno County Project* and *Road Preservation Treatments Various Locations in Fresno County Project* involve resealing existing roads and are not anticipated to increase VMT (Fresno County 2024c, 2024d); therefore, no cumulative impact to land use and planning impacts associated with these projects would occur.

The *Key Energy Storage Project EIR* determined that trip generation during construction would range from 70 to 540 Average Daily Traffic, with construction traffic distributed along I-5, SR-269, West Jayne Avenue. The *Fifth Standard Solar Project Complex EIR* determined that daily round trips would be 3,200 and construction traffic could affect I-5, SR-198, SR-269, West Jayne Avenue, and Avenal Cutoff Road. Traffic associated with operation and maintenance activities of the project is negligible, with an estimated 15 round trips per day. If construction of the Proposed Project overlapped with the cumulative projects, traffic on roads near the Project Area would increase during the construction period. These projects, like the Proposed Project, would generate little traffic during operations.

VMT from the cumulative projects listed in Table 4-1 have contributed to, and will continue to contribute to, cumulative VMT impacts as well as similarly cumulative secondary physical environmental effects such as increased GHG emissions. These projects would be required to comply with SB 743 during project-specific environmental review.

4.5.18 Tribal Cultural Resources

The geographic scope of potential cumulative impacts to tribal cultural resources is a 1-mile radius around the Project Area. The tribal cultural resources within this radius are expected to be similar to those that occur in the Project Area due to their proximity and similar environments. The temporal scope for cumulative impacts to tribal cultural resources would be the duration of the Project's ground-disturbing activities.

As discussed in Section 3.18, the records search, pedestrian survey, and Sacred Lands File search conducted by the Native American Heritage Commission did not indicate the presence of tribal cultural resources within the Project Area. In the event that buried significant tribal cultural resources are encountered during Project construction, mitigation measures are recommended, including cultural resource worker education, cultural resource monitoring, procedures for inadvertent discovery of archaeological resources, and procedures for the inadvertent discovery of human remains.

The same unidentified resources could be affected by the cumulative projects within 1 mile of the Proposed Project as listed in Table 4-1. These projects would be subject to regulations concerning tribal resources and would need to implement similar mitigation measures to reduce impacts to unknown tribal cultural resources within the area.

With implementation of such measures, the Project's potential significant impact would be reduced to a less-than-significant level; therefore, the cumulative (less than significant) contribution would not result in a significant cumulative impact to tribal cultural resources.

There is no indication of any existing significant adverse condition relating to the discovery of human remains in the geographic area of cumulative consideration to which the Project or any of the cumulative projects could contribute. The Project would have a less than significant cumulative impact related to the discovery of human remains.

4.5.19 Utilities and Service Systems

The geographic scope considered for potential cumulative impacts related to utilities and service systems includes the water, wastewater, stormwater, and telecommunication facilities that serve the Project Area.

As discussed in Section 3.19, the Project would result in a less-than-significant impact to utilities and service systems associated with the construction of water, wastewater, stormwater, and telecommunication facilities primarily internal to the Project Area.

4.5.19.1 Water

During construction and decommissioning, water would be primarily used for dust suppression and soil compaction during ground disturbing activities. The water supply for construction would come from the two existing onsite wells pumping groundwater from the Westside Subbasin, regulated by the Westlands Water District (WWD) for the subbasin under Sustainable Groundwater Management Act (SGMA). The projected use of groundwater by the Project during construction would be well within the allocation cap; during operations, the projected annual water use of 36.5 AF would be far less than the allocation cap, even after the cap reaches its ultimate goal in 2030 (88 acre-feet per year). The Project's operational water consumption would include water used for panel washing and to periodically replenish the existing onsite pond, which would be utilized as a source of water for emergency fire suppression. The lifecycle of the Project would eliminate the use of over 23,700 AF of groundwater because the current agricultural uses of the Project would end when construction begins.

The adjacent *Key Energy Storage Project* and *Fifth Standard Solar Project Complex* would be required to complete similar Water Supply Assessments applicable to those development projects, which would ensure that sufficient water supplies would be available to meet their water demands during construction and operation. Additionally, implementation of these projects would result in an incremental decrease in total water demand because the irrigation under existing conditions would cease. For these reasons, the Project would not result in a cumulatively considerable contribution to a cumulative impact on demand for groundwater resources.

4.5.19.2 Wastewater

The Project would not require connection to any septic systems or sewer infrastructure. A minimal amount of wastewater would be generated from the construction of the Project, and portable restrooms would be provided during construction. No permanent wastewater facilities, such as septic tanks, would be required; therefore, wastewater would not be generated during operation. The Project's incremental contribution to potential significant cumulative effect would not be cumulatively considerable.

4.5.19.3 Stormwater

The Project would be designed so that the control of runoff would be maintained or improved compared to the current, pre-construction conditions. Grading for drainage and stormwater retention basins would be conducted per County-approved grading and drainage plans. The Project would implement stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches to maintain or improve the existing runoff conditions in the Project Area. The Project would comply with Fresno County Department of Public Works stormwater requirements, NPDES General Construction Permit requirements, the SWPPP, and related BMPs.

The *Key Energy Storage Project EIR* identified new stormwater infrastructure to support the project, including a drainage swale and two detention basins to retain stormwater, prevent runoff, and reduce erosion and sedimentation. These stormwater facilities would be designed to meet State Water Board and Fresno County requirements. All cumulative projects listed in Table 4-1 would all be required to manage potential runoff from the construction sites and prepare a SWPPP listing BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements.

When considered in combination with other projects with similar stormwater detention systems, the Project's incremental contribution to impacts would not be cumulatively considerable. Impacts would be cumulatively less than significant.

4.5.19.4 Electricity

Construction of the Project would not displace existing electrical facilities and would tie into existing offsite facilities. Electricity consumption during operations would occur primarily from solar panel maintenance, operation of the BESS, operation of facilities and substation and pumping of groundwater. Any electricity consumed during operation of the Project would be offset by the power produced by the solar panels, which would generate as much as 171,500,000 kWh of electricity annually. The Project's less-than-significant incremental impacts related to electricity service would combine with other cumulative projects' incremental impacts, but they would not result in a significant adverse cumulative environmental effect given the limited nature of the work and the overall benefit to the electricity system. The Project's incremental contribution to electricity consumption, therefore, would not be cumulatively considerable.

4.5.19.5 Telecommunications

The Project would require connection with the existing local telecommunication service, typically comprising a fiber optic cable and/or a 25-pair telephone line installed above or below ground, attached to either the existing distribution lines or installed immediately adjacent to the Project substation. Telecommunication lines may need occasional maintenance through the operation phase. The construction required to expand telecommunications services for Project purposes would generate a less-than-significant impact.

The *Key Energy Storage Project* and *Fifth Standard Solar Project Complex* would use Supervisory Control and Data Acquisition System (SCADA) systems, which require cable internet or Wi-Fi service. The

telecommunications facility service demand of these SCADA systems would not exceed the demand of similar commercial uses.

The Project's incremental impact on telecommunications facilities, combined with the incremental impacts of other cumulative projects, would not result in a significant adverse cumulative effect,

4.5.20 Wildfire

The geographic scope for potential cumulative impacts to wildfire encompasses the Project Area and the surrounding areas, which consist primarily of agricultural land uses and operating solar projects.

As discussed in Section 3.19, the Project would have a less-than-significant wildfire impact with respect to the potential to impair an adopted emergency response or evacuation plan, exacerbate wildfire risk and expose project occupants to pollutant concentrations, install infrastructure that may exacerbate fire risk, and expose people or structures to significant risks.

4.5.20.1 Emergency Response or Evacuation Plan

The Project Area is not located within a designated high Fire Hazard Severity Zone (FHSZ) and is not located in an area identified as having exposure to potential hazards or within an identified evacuation route. The closest *Very High FHSZ* is located 21.5 miles west of the Project Area, to the west of the City of Coalinga in the Coastal Mountain Range. Access would be maintained throughout Project construction, and appropriate detours would be provided in the event of potential road closures. The Project would comply with the goals and objectives in the Fresno County Multi-Jurisdictional Hazard Mitigation Plan, including adequate ingress and egress routes, development setbacks, pest management plans, and weed management plans. Impacts would be less than significant.

No evacuation routes for the region are identified in the County's Multi-Jurisdictional Hazard Mitigation Plan or General Plan. During an emergency, evacuation routes are identified and coordinated as needed by local law enforcement and emergency service providers. Construction or operation of the cumulative projects listed in Table 4-1 would then be taken into consideration when coordinating emergency response plans or evacuation routes. The Project's less than significant contribution, when combined with the incremental impacts of other projects, would not cause a significant cumulative impact.

4.5.20.2 Wildfire Risk

The use of maintenance vehicles could increase fire risk due to driving heated mufflers over vegetated areas. The installation of utilities, including the gen-tie, BESS, and internal/perimeter maintenance roads, would not be placed within a FHSZ, and any existing vegetation would be cleared. A fire-suppression system would be included and would be designed in accordance with federal, state, and local regulations. Additionally, Project construction would comply with applicable fire codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials.

The Project Area and the surrounding area are characterized by agricultural uses, solar projects, flat topography, and a sparse population. The *Key Energy Storage Project* and *Fifth Standard Solar Project*

Complex involve components similar to the Proposed Project that could exacerbate fire risk. However, these projects are also not located in a State Responsibility Area or Very High FHSZ and are subject to the same fire codes and ordinances established to reduce fire risk. The incremental cumulative impacts of wildfire risk to the region as a whole would be less than significant.

5.0 ALTERNATIVES

5.1 Introduction

As required by the California Environmental Quality Act (CEQA), this chapter describes and analyzes a range of reasonable alternatives to the San Luis West Solar Project (Project or Proposed Project) that could feasibly attain most of the basic project objectives while avoiding or substantially lessening one or more of the significant impacts of the Proposed Project. Although no significant impacts were identified for the Proposed Project in this Draft Environmental Impact Report (EIR), this chapter provides a comparative analysis with sufficient detail to foster informed decision making and public participation in the environmental process.

Two alternatives to the Proposed Project are analyzed in this chapter and discussed in terms of their merits relative to the Project:

- Alternative 1 (No Project)
- Alternative 2 (Reduced Intensity)

5.2 Requirements for Alternatives Analysis

In order to fully evaluate the environmental effects of projects, CEQA mandates that an EIR identify ways to mitigate or avoid the significant effects that a project may have on the environment. In compliance with CEQA Guidelines Section 15126.6(a), this Draft EIR must also describe a range of reasonable alternatives to the Project, or to the location of the Project, that would feasibly attain most of the basic objectives of the Project but avoid or substantially lessen any of the significant impacts of the Project. This Draft EIR need not consider every conceivable alternative; rather, it must consider a reasonable range of potentially feasible alternatives to the Project that will foster informed decision making and public participation. The discussion of alternatives shall focus on alternatives to the Project or to the location of the Project, which would avoid or substantially lessen the significant effects of the Project, even if these alternatives would impede to some degree the attainment of the Project objectives or be more costly (CEQA Guidelines Section 15126.6[b]).

The County, acting as the CEQA Lead Agency, is responsible for selecting a range of Project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. The range of alternatives addressed in an EIR is governed by a *rule of reason*, which requires the EIR to set forth only the alternatives necessary to permit a reasoned choice. Of the alternatives considered, the EIR needs to examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project. CEQA Guidelines Section 15364, define *feasible* as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." The discussion of Project alternatives must include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

This Draft EIR should also identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process and explain the underlying reasons for the Lead Agency's determination. Under CEQA Guidelines Section 15126.6(e)(1), an EIR must evaluate a *No Project* alternative in order to allow decision makers to compare the effect of approving the Project to the effect of not approving the Project. The *No Project* analysis shall discuss the existing conditions at the time that the notice of preparation is published, or, if no notice of preparation is published, at the time that environmental analysis is commenced; it should also discuss what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.

As required under Section 15126.6(e)(2) of the CEQA Guidelines, the EIR must identify the environmentally superior alternative. Pursuant to the CEQA Guidelines, if the No Project Alternative is determined to be the most environmentally superior project, then another alternative among those evaluated must be identified as the environmentally superior alternative.

5.2.1 Project Objectives

In developing the alternatives to be addressed in this chapter, consideration was given to each alternative's ability to meet the basic objectives of the Project and eliminate or substantially reduce any identified environmental impacts. Upon development, the Project would achieve the following objectives:

- Construct and operate a solar photovoltaic power-generating facility to generate and deliver low-cost, clean renewable energy to the electrical grid operated by Pacific Gas and Electric Company (PG&E) for regional consumption.
- Assist California utilities in meeting the State's resource adequacy needs by storing excess solar generation for use during peak hours when resources are strained.
- Assist California utilities in meeting their obligations under California's Renewable Portfolio Standards (RPS) Program, including 60 percent of retail sales from renewable sources by the end of 2030.
- Assist California in meeting the Assembly Bill (AB) 32 greenhouse gas (GHG) emissions reduction goal of 40 percent below 1990 levels by 2030.
- Provide renewable-energy-related job opportunities to support economic and workforce development as the State seeks to recover from the devastating economic impacts of the shutdowns in the face of COVID-19.

5.3 Alternatives Considered but Rejected

An EIR should identify any alternatives that were considered but rejected by the lead agency and briefly explain the reasons underlying the lead agency's determination. Among the factors used to eliminate alternatives from detailed consideration in the EIR is failure to meet most of the basic project objectives or inability to avoid significant environmental effects (CEQA Guidelines 15126.6[c]). Another consideration for excluding an alternative from further consideration that is consistent with the requirement to address

a *reasonable range* of alternatives is an alternative's similarity to other alternatives that are addressed in detail.

The following development scenario was considered and rejected as a potential alternative to implementation of the Proposed Project: Non-Contracted Land.

Based on Section 15126.6 of the CEQA Guidelines, the alternative described below was rejected based on the criteria of not being reasonable or not feasibly attaining most of the basic objectives of the Project while reducing or avoiding any of the significant impacts of the Proposed Project. No significant impacts were determined for the Proposed Project.

5.3.1 Non-Contracted Land

The Applicant undertook an extensive search to find proximate, non-contracted lands that were both available and suitable for the proposed use. The Applicant has established criteria for site selection for solar development, which reflect economic, environmental, and operational objectives. These criteria comprise the following:

- A substation with sufficient capacity must be available to provide a Point of Interconnection in reasonably close proximity to load centers (within 75 to 100 miles).
- The site must be located as close as possible to the PG&E Gates Substation, although sites as far as 4 miles from the PG&E Gates Substation were considered.
- The site must be of sufficient size to support an economically viable utility-scale project. Combinations of contiguous parcels were considered.
- The land must have an open and relatively flat landscape (i.e., less than 15 percent slope across the majority of the site) and cannot contain any permanent structures that cannot be removed (e.g., housing, historic buildings, industrial facilities).
- The site has legal access and site control (either purchase or lease) and can be secured.
- The site must not contain sensitive habitat.

The Applicant began the search for proximate, non-contracted land by first identifying a potential substation. This is a key criterion because substation facilities and gen-tie line upgrades can be extremely costly and have the potential to undermine a project's economic viability. Gen-tie line upgrade costs are largely passed onto the ratepayer over the life of a project; therefore, connecting to a pre-existing substation with available capacity is in the public's best interest. The PG&E Gates Substation was selected as a potentially suitable substation for interconnection in Fresno County.

A search radius of 4 miles was set around the PG&E Gates Substation. Beyond this distance, the high cost of construction of the gen-tie line between the solar facility and the substation would make the Project economically infeasible. The search demonstrated that most of the lands within 4 miles of the PG&E Gates Substation are under a Williamson Act contract. The search concluded that there is no proximate non-contracted land, which is both available and suitable for the use to which it is proposed the contracted

land be put, or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate non-contracted land.

5.4 Alternatives Carried Forward For Analysis

The following alternatives have been identified and evaluated to provide decision makers with a reasonable range of alternatives that would eliminate or reduce the impacts of the Project. Factors considered in selecting the alternatives include site suitability, location relative to the PG&E Gates Substation, other plans or regulatory limitations, and whether the Applicant can reasonably acquire, control, or otherwise access an alternative site. An EIR does not need to consider an alternative if its impact cannot be reasonably ascertained and implementation is remote or speculative. In accordance with CEQA Guidelines, the alternatives considered in this Draft EIR include those that:

1) could accomplish most of the basic objectives of the Project;
2) are reasonably feasible given the nature of the Project and surrounding land uses; and
3) could avoid or substantially lessen one or more of the significant effects of the Project.

5.4.1 Alternative 1 (No Project)

Under Alternative 1 (No Project), the Project Area would not be developed; it would remain under current conditions and would continue its agricultural use.

5.4.2 Alternative 2 (Reduced Intensity)

The Proposed Project, as designed, would temporarily and permanently affect 1,100 acres of seven parcels that total 1,400 acres. The Project would include approximately 770 acres of solar panels and associated infrastructure which include the new Project substation, Battery Energy Storage System (BESS), Operations and Maintenance (O&M) building, associated equipment, and transmission easement areas for underground and overhead medium-voltage collection lines. Alternative 2 would reduce the Project's intensity by 25 percent, which would reduce the Project Area to approximately 577.5 acres of solar panels and associated infrastructure from the original 770 acres. The total 125 Megawatt (MW) capacity under Alternative 2 would be reduced to approximately 94 MW, with a 23 MW BESS.

5.5 Analysis of Alternatives

The following discussion compares the impacts of each alternative with the impacts of the Proposed Project. A conclusion is provided as to whether each alternative would result in one of the following:

- a reduction or elimination of the impact;
- a greater impact than the Proposed Project;
- the same impact as the Proposed Project; or
- a new impact in addition to the impacts of the Proposed Project.

5.5.1 Alternative 1 (No Project)

Pursuant to CEQA (§15126.6[e][2]), Alternative 1 (No Project) should discuss what would reasonably be expected to occur, based on current plans and consistent with available infrastructure and community services, in the foreseeable future. Under Alternative 1, the Proposed Project would not be carried forward; the Project Area would remain under current pre-Project conditions and would continue its existing agricultural use. Due to the proximity of the existing PG&E Gates substation located along West Jayne Avenue, to the north of Subarea A, it is unlikely that the subject properties would be developed with another electrical transmission or distribution substation as permitted subject to approval of a Director Review and Approval Application in the foreseeable future. Additionally, it is unlikely that another developer (solar or otherwise) would propose development of all three subareas simultaneously given the existing lease agreements in place and ownership of 150 acres of land by the Project. As such, for purposes of analysis, Alternative 1 assumes that the Proposed Project would not be carried forward and the sites would remain in their existing condition.

5.5.1.1 Impact Analysis

Under Alternative 1, the Proposed Project would not be developed. Because the this alternative would not result in any additional impacts to the environment, all environmental issues would be less than those identified for the Proposed Project. However, because the Project Area is currently used for agriculture and would continue to be used as such under this alternative, the following impact analysis provides a quantitative analysis as a means to disclose what the existing development within the Project Area produces, emits, or otherwise utilizes.

Aesthetics

If Alternative 1 is implemented, the Proposed Project would not be developed, and the Project Area would continue to be used for agriculture; therefore, no impact related to aesthetics would occur, no change to the existing visual character or quality of public views would be made, and no new sources of light and glare would be generated.

Agriculture and Forestry Resources

Under Alternative 1, the proposed 1,100-acre Project Area would not be converted to non-agricultural use. The parcels, which are designated as Prime Farmland, would continue with their existing agricultural uses. Additionally, the Project parcels are subject to Williamson Act Contracts. Alternative 1 would not result in the conversion of farmland, nor would it conflict with existing zoning or Williamson Act Contracts; no impacts to forest and timberland resources would occur, and no physical changes in the environment that could result in the conversion of farmland to non-agricultural use would be made. No impacts to agriculture and forestry would occur.

Air Quality

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agricultural uses. However, emissions would still be

generated from any farm equipment or vehicles that are part of the existing condition. The volume of operational emissions from farm equipment or vehicles would be less than what would occur under the Proposed Project, and impacts would be less than significant.

Alternative 1 would not result in air quality impacts associated with general construction activities, such as the operation of onsite construction equipment, fugitive dust from site grading activities, or travel by construction workers. Additionally, this alternative would not generate new operational emissions from worker commutes and equipment used during periodic maintenance. The Proposed Project, once implemented, would offset 125 MW of energy from more-polluting sources and would result in a reduction of emissions that would not occur under Alternative 1 (No Project).

Biological Resources

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. The Project Area would remain in its existing condition, and no physical changes would occur. Therefore, Alternative 1 would have no impact on biological resources.

Cultural Resources

The Project Area has an overall low sensitivity for buried subsurface archaeological resources that qualify as Historical Resources. Because Alternative 1 would not include subsurface excavation beyond that currently occurring associated with typical agricultural activity, it is unlikely that unknown subsurface cultural resources qualifying as Historical Resources could be encountered. No impact would occur.

Energy

Under existing conditions, the Project Area's energy usage is minimal and comprises the use of any vehicle fuel necessary for the existing agricultural uses.

Because Project Area would not be developed under Alternative 1, no new energy consumption associated with general construction activities would occur, such as gasoline and diesel to power off-road construction equipment and on-road vehicles as well as electricity consumed from water pumping during construction. Additionally, under this alternative, there would be no operational energy consumption in the form of electricity use from operation of the facilities and substation, operation of the BESS, solar panel maintenance, and pumping of groundwater, nor transportation fuel use from worker commuter trips, trucks, off-road equipment, and panel washing activities. However, the Proposed Project, once implemented, would generate up to 171,500,000 kWh of electricity annually and would provide up to 30 MW of battery storage. This would offset onsite operational electricity use and assist State investor-owned utilities in meeting their obligations under State RPS guidelines by providing a renewable energy alternative to the utilities' existing power mix. The Proposed Project's electric-power-generating capacity complies with the Attorney General's recommended measure to "install solar and wind power systems, solar and tank less hot water heaters, and energy-efficient heating ventilation and air conditioning." The Proposed Project could result in a reduction of GHG emissions. This energy generation and storage would not occur under Alternative 1 (No Project).

Alternative 1 would not increase energy consumption over current demands; however, it would not assist California Investor-Owned utilities in meeting their obligations under the State's RPS Program, nor would it assist the State in meeting the AB 32 GHG emissions reduction goal of 40 percent below 1990 levels by 2030. Impacts would be less than significant and less than that of the Proposed Project.

Geology and Soils

Under Alternative 1, the Proposed Project would not be constructed or operated, and the Project Area would continue to be used for agriculture. No ground disturbance or development that could result in the exacerbation of impacts involving seismic activity, unstable or expansive soils, soil erosion, septic tanks, or paleontological resources would occur; therefore, no impact related to geology and soils would occur.

Greenhouse Gas Emissions

Under existing agricultural uses, the Project Area is used for activities that generate GHG emissions from farm equipment and vehicles.

The Proposed Project would result in the emission of 75 metric tons of carbon dioxide equivalent ($MTCO_2e$) from short-term construction activities and 157 $MTCO_2e$ annually from operational activities. However, because the Proposed Project is intended to generate electricity from a renewable source of energy, it would not result in substantial GHG emissions due to the burning of fossil fuels once in operation. Overall, the Proposed Project would create renewable energy during its operational life; this energy would displace the GHG emissions that would otherwise be produced by existing power generation resources (including natural gas, coal, and renewable combustion resources). The Proposed Project would generate a maximum of 125 MW of electricity at any one time, which would serve to displace GHG emissions and, thus, assisting in the attainment of the State's goal to reduce GHG emissions. This substantial net reduction in GHG emissions would not occur under Alternative 1 (No Project).

Hazards and Hazardous Materials

Under Alternative 1, the Proposed Project would not be constructed or operated, and the Project Area would continue to be used for agriculture. The Project Area would remain in its existing condition, and no physical changes would occur. All hazardous substances currently used for existing agricultural operations (e.g., fuel) would remain consistent with current practices. Impacts related to hazards or hazardous materials would be less than significant.

Hydrology and Water Quality

Under Alternative 1, the Proposed Project would not be constructed or operated, and the Project Area would continue to be used for agriculture. The Project Area would remain in its existing condition, and no physical changes would occur. No impact related to hydrology and water quality would occur.

Land Use and Planning

The Project Area is designated as *Agriculture* in the Fresno County General Plan and is zoned *Exclusive Agriculture (AE)* in accordance with Fresno County's Zoning Classification. The Agriculture designation

provides for the production of crops and livestock, and for the location of necessary agricultural commercial centers, agricultural processing facilities, and certain non-agricultural activities. The Project Area's existing agricultural production is a permitted use. The Project Area is also located on parcels with Williamson Act Contracts. Under Alternative 1, these contracts would not require cancellation. This alternative would be consistent with existing land use and zoning designations and would not conflict with the Williamson Act Contracts in place. No impacts to land use and planning would occur.

Mineral Resources

The Project Area and adjacent properties are not located on lands designated as Mineral Resource Zones by the State. In addition, no active mines or petroleum extraction facilities are located within or immediately adjacent to the Project Area. The Project Area's existing agricultural production would not result in impacts to mineral resources.

Noise

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. Under the Proposed Project, construction-related noise impacts were reduced to a less-than-significant level through the implementation of mitigation measures. Under Alternative 1, no construction would occur because the alternative would result in the continuation of existing conditions within the Project Area; therefore, no construction noise impacts associated with Alternative 1 would occur. This alternative would continue existing agricultural operations; noise generated during such operations is considered part of existing ambient conditions; therefore, the Proposed Project would generate more noise than Alternative 1 (No Project).

Population and Housing

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. Population and housing for the County would therefore remain the same under existing conditions. The existing agricultural uses would not cause an increase in population or housing. No impact would occur.

Public Services

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. Because onsite agricultural activities would remain the same, there would be no substantial adverse impacts to performance objectives for fire protection, police protection, schools, parks, or other public facilities. No impact to public services would occur.

Recreation

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. This alternative would not increase the use of existing parks and recreational activities, nor would it cause impacts to these facilities such that construction or expansion of recreational facilities is warranted. No impact would occur.

Transportation

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. Any trips generated under Alternative 1 would be from trucks used during agricultural production or land maintenance, which are part of the existing conditions. This would be less than the estimated Vehicle Miles Traveled (VMT) from the construction (2,187,301 VMT) and operation (11,025 VMT over a 35-year period) of the Proposed Project. Decommissioning would generate trips and VMTs very similar to that of construction. For that reason, additional quantitative analysis for decommissioning was not included for this analysis. Development of the Proposed Project would support California's statutory energy goal of reducing GHGs through development of a source of solar energy and a diversity of land uses.

Less vehicle trips would occur under Alternative 1; however, this alternative would not generate renewable energy or reduce GHG emissions. Vehicle trips and transportation impacts would be less than significant.

Tribal Cultural Resources

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. Because Alternative 1 would not include subsurface excavation beyond that currently occurring associated with typical agricultural activity, it is unlikely that unknown subsurface tribal cultural resources could be encountered during regular agricultural activities. No impact would occur.

Utilities and Service Systems

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. The Project Area is rural and unincorporated, and no public water utility provides potable or treated drinking water to this location. Water for existing agriculture is currently pumped from onsite groundwater wells or from the onsite pond. The Proposed Project would have eliminated current groundwater use, but would require approximately 120 acre-feet (AF) for construction, 1 AF per year (AFY) for the operational life of the Project (approximately 35 years), and approximately 136 AF for decommissioning. Over the lifecycle of the Proposed Project, current agricultural uses would use approximately 23,700 AF of groundwater. A 10 AF-capacity pond is located onsite that is currently used for irrigation water storage and would remain under Alternative 1. The agricultural use would have ceased for 35 years due to construction of the Proposed Project, and the pond would have been used for construction and operation of the Project. Construction of the Proposed Project would require the pond to be periodically replenished with about 2.92 AF per month during the construction period using water pumped from the onsite wells. Agricultural uses under Alternative 1 would require more water than the solar uses under the Proposed Project.

No natural drainages traverse the Project Area. The Proposed Project would alter existing drainage patterns onsite and would implement stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches to improve the existing runoff conditions. Under Alternative 1, no management of stormwater runoff volume and water quality would occur.

Under Alternative 1, no electricity consumption that would cause significant environmental effects would occur. As described above, once the Proposed Project is implemented, it would generate up to 171,500,000 kWh of electricity annually and would provide up to 30 MW of battery storage. This would offset onsite operational electricity use and assist State investor-owned utilities in meeting their obligations under State RPS guidelines by providing a renewable energy alternative to the utilities' existing power mix. This energy generation and storage would not occur under Alternative 1.

No wastewater or natural gas would be generated under Alternative 1. This alternative would not require the construction of new or expanded wastewater treatment or natural gas facilities, nor would it require telecommunication utilities. No impact would occur.

Wildfire

Under Alternative 1, the Proposed Project would not be constructed, operated, or decommissioned, and the Project Area would continue to be used for agriculture. The wildfire hazard risk within the Project Area is relatively low because it is not located within a State Responsibility Area (SRA) or Federal Responsibility Area (FRA) and is outside of areas identified by California Department of Forestry and Fire Protection (CAL FIRE) as having substantial or very high risk. Alternative 1 would not result in development that could create or exacerbate fire risk. No impact related to wildfire would occur.

5.5.1.2 Conclusion

Alternative 1 (No Project) would not result in impacts associated with aesthetics, agricultural and forestry resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use, mineral resources, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, or wildfire because the continuation of the existing agricultural use would not result in physical changes that would have any effects. The continuation of the existing agricultural use would result in air quality emissions, energy consumption, GHG emissions, and transportation activity; however, these effects are part of the existing condition and are not increased from baseline conditions. Air quality emissions, energy consumption, GHG emissions, and transportation activity associated with the Proposed Project would be increased from the baseline condition but would remain less than significant or would be reduced to less than significant with implementation of mitigation measures. The magnitude of impacts to utilities and service systems would be increased under Alternative 1 (No Project) because agriculture requires a significantly greater amount of water consumption; however, the significance determination would remain less than significant. The remaining environmental topics of energy, hazards and hazardous materials, and noise would have a reduced magnitude of impact when compared with the Proposed Project.

Alternative 1 (No Project) would not meet any of the Project objectives. Under Alternative 1, no solar power-generating facility would be constructed, and no renewable energy would be delivered to the electrical grid for regional consumption. This alternative would also not be able to assist the State in meeting its resource adequacy needs, its RPS Program obligations, or its AB 32 GHG emission reduction goal. Lastly, this alternative would not provide any renewable-energy-related job opportunities.

5.5.2 Alternative 2 (Reduced Intensity)

With the intent of reducing the Project's agricultural, air quality, greenhouse gas, noise, and traffic impacts, the County has considered a Reduced Intensity Alternative (Alternative 2).

The Proposed Project, as designed, would temporarily and permanently affect approximately 1,100 acres of seven parcels that total 1,400 acres. The Project would include approximately 770 acres of solar panels and associated infrastructure which include the new Project substation, BESS, O&M building, associated equipment, and transmission easement areas for underground and overhead medium-voltage collection lines. Alternative 2 would reduce the Project's intensity by 25 percent, which would reduce the Project Area to approximately 577.5 acres from the original 770 acres. The total 125 MW capacity under Alternative 2 would be reduced to approximately 94 MW, with a 23 MW BESS.

5.5.2.1 Impact Analysis

Aesthetics

Under Alternative 2 (Reduced Intensity), the Project Area would be reduced by 25 percent, approximately 192.5 acres; therefore, the magnitude of impacts related to visual character and quality of the Project Area would be reduced because less area would be required for the placement of solar panels and associated infrastructure.

The lands surrounding the Project Area under Alternative 2 (Reduced Intensity) would be the same as those surrounding the Proposed Project and would consist of agricultural lands, the PG&E Gates Substation, and solar farms. Substantial changes to the visual character or quality of the Project Area under Alternative 2 would not be expected because Project components would still not be visible from I-5 due to the proposed low profile and intervening vegetation and structures. Similar to the Proposed Project, Alternative 2 would result in less-than-significant short-term visual impacts due to construction and would not substantially degrade the existing visual character or quality of public views during operations.

Agriculture and Forestry Resources

Under Alternative 2, the Project Area would be reduced by 25 percent, approximately 192.5 acres. A total of 577.5 acres would be converted to non-agricultural use for at least 35 years. The parcels, which are designated as Prime Farmland, are subject to Williamson Act Contracts. Similar to the Proposed Project, owners of these parcels would be required to petition to cancel the Williamson Act Contracts before development. Project construction, operation, and maintenance are not expected to result in impacts related to the chemical composition or the physical properties of onsite soils such that the long-term suitability for agricultural use would be affected.

Under this alternative, less agricultural land would be converted to non-agricultural use than under the Proposed Project; however, the significance determination would remain less than significant.

Air Quality

Under Alternative 2, the Project footprint would be reduced by 25 percent and would consist of a 94 MW solar photovoltaic (PV) electric generation facility coupled with an estimated 23 MW BESS. Because Alternative 2 would result in a smaller overall facility with a smaller Project Area and lower electrical capacity/size, it would result in fewer emissions generated during Project construction, maintenance, and decommissioning. The Proposed Project would not exceed San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds for reactive organic gases, nitric oxides, carbon monoxide, SOx, or particulate matter during construction or operations. Alternative 2 would have less emissions than the Proposed Project and would also not exceed SJVAPCD thresholds. Diesel Particulate Matter (DPM) emissions during construction and operation of Alternative 2 would represent a small fraction of significance thresholds and would disperse to negligible levels. Similar to the Proposed Project, health impacts associated with exposure to DPM are not expected to be significant. Therefore, air quality impacts related to Alternative 2 (Reduced Intensity) would be less than significant.

Alternative 2 would contribute to the energy generation requirements necessary to assist the State in meeting its resource adequacy needs through solar energy storage; its RPS Program obligations of 60 percent of retail sales from renewable sources by 2030; and its AB 32 GHG emissions reduction goal of 40 percent below 1990 levels by 2030. However, this alternative would not provide as much renewable energy as the Proposed Project.

Biological Resources

Under Alternative 2 (Reduced Intensity), a total of 825 acres would encompass all areas of temporary and permanent impacts. Similar biological resources impacts as discussed under the Proposed Project would apply to Alternative 2, including potential construction-related impacts to special-status wildlife species: burrowing owl, Swainson's hawk, northern harrier, California horned lark, merlin, loggerhead shrike, San Joaquin kit fox, and nesting birds. Additionally, even with the reduced Project Area, potential operational impacts to migratory birds due to electrocution from and/or collision into power lines, solar panels, or other infrastructure would still occur. The design of Alternative 2 would also consist of low-height PV arrays, which represent a much lower collision risk compared to other types of renewable energy facilities such as wind turbines, and only minimal lighting would be used onsite to avoid attracting migratory bird species. Similar to the Proposed Project, special-status wildlife species with potential to inhabit the solar facility site during decommissioning include burrowing owl, San Joaquin kit fox, American badger, nesting birds, and roosting bats. As listed in Section 3.4.5 of this Draft EIR, Mitigation Measures BIO-1 through BIO-8 would be required to reduce Project-related impacts to special-status wildlife during construction, operations, and decommissioning to a less-than-significant level.

No riparian habitat or other sensitive natural communities, wetlands protected by the U.S. Army Corps of Engineers or Regional Water Quality Control Board, or wildlife nursery sites, were identified within the Project Area or within the gen-tie line alignments. Therefore, no impacts to these biological resources would occur under Alternative 2 (Reduced Intensity).

Cultural Resources

The record search and cultural resources pedestrian survey identified the presence of one previously recorded cultural resource (P-10-006640) in the northwestern portion of the Project Area, outside of the area of direct impact. Subsurface deposits across the Project Area consist of Late Holocene alluvium fan deposits, which are generally considered to have the potential to contain buried archaeological resources depending upon the likelihood of past human activity in the area. Similar to the Proposed Project, under Alternative 2, the Project Area has an overall low sensitivity for buried subsurface archaeological resources that qualify as Historical Resources; however, because Alternative 2 would still include subsurface excavation up to depths of approximately 10 feet, the possibility remains that unknown subsurface cultural resources qualifying as Historical Resources could be encountered. Therefore, impacts to unknown cultural resources that could qualify as significant historical resources would be mitigated to less than significant through the implementation of Mitigation Measures CUL-1 through CUL-4, as described in Section 3.5.5.

Energy

Under Alternative 2, the Project Area would be reduced by 25 percent and would consist of a 94 MW solar PV electric generation facility coupled with an estimated 23 MW BESS. This alternative would have similar but slightly less demands on energy resources during construction, operation, and decommissioning given the reduced area. Construction of Alternative 2 would use a similar mixture of equipment as construction for the Proposed Project; therefore, this alternative would require a similar amount of construction-related automotive fuel. Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project Area. Impacts to energy resources would be less than significant and comparable to the Proposed Project.

The solar panels under the Proposed Project would generate up to 171,500,000 kWh of electricity annually; however, with a 25 percent reduction in intensity, this alternative would generate up to approximately 128,625,000 kWh of electricity annually. This would offset onsite operational electricity use and assist State investor-owned utilities in meeting their obligations under State RPS guidelines by providing a renewable energy alternative to the utilities' existing power mix. However, due to the reduction in the Project Area, Alternative 2 would not fully address the Project's objectives. Although this alternative would contribute to meeting the goals of the RPS Program, it would not provide as much renewable energy as the Proposed Project.

Geology and Soils

Because Alternative 2 is located in the same geographical area as the Proposed Project, potential impacts related to ground shaking, landslides, soil erosion, and unstable and expansive soils would be the same.

Similar to the Proposed Project, under Alternative 2, the Holocene-age unit underlying the Project Area have low paleontological potential, whereas the Pleistocene-age unit have undetermined paleontological potential. However, because this alternative would still include subsurface excavation up to depths of approximately 15 feet, the possibility remains that unknown subsurface paleontological resources could be encountered and inadvertently destroyed during ground-disturbing activities. Impacts to unknown

paleontological resources would therefore be mitigated to less than significant through the implementation of Mitigation Measures GEO-1 and GEO-2, as described in Section 3.7.6 of this Draft EIR.

Greenhouse Gas Emissions

Under Alternative 2, the Project Area would be reduced by 25 percent and would consist of a 94 MW solar PV electric generation facility coupled with an estimated 23 MW BESS. The main source of GHG is the combustion of fuel in construction equipment, in motor vehicles used to haul materials, and in motor vehicles used by workers commuting to and from the Project Area. The Proposed Project would generate an estimated 75 $MTCO_2e$ during construction and 157 $MTCO_2e$ during operations. Because Alternative 2 would result in a smaller overall facility with a smaller Project Area and lower electrical capacity, this would result in fewer emissions generated during construction, maintenance, and decommissioning. The total annual emissions would not exceed the GHG significance threshold of 900 $MTCO_2e$ per year; therefore, impacts would be less than significant.

The Project is intended to generate electricity from a renewable source of energy and would not result in substantial GHG emissions once in operation. The renewable energy generated would displace the GHG emissions that would otherwise be produced by existing power generation resources (including natural gas, coal, and renewable combustion resources). Additionally, it would assist in the attainment of the State's AB 32 GHG emissions reduction goal of 40 percent below 1990 levels by 2030. However, due to the reduction in the Project Area, Alternative 2 would not fully address the Project's objectives. Although this alternative would contribute to meeting the RPS Program obligations and AB 32 GHG emissions reduction goal, it would not provide as much renewable energy as the Proposed Project.

Hazards and Hazardous Materials

Although the Alternative 2 Project Area is smaller than under the Proposed Project, construction would still require the use of diesel and gasoline fuels and other hazardous materials such as oils, solvents, hydraulic fluids, and paints commonly associated with construction equipment. O&M activities would also still involve the transportation, use, or temporary storage of a variety of hazardous materials, such as batteries, hydraulic fluid, diesel fuel, insulation oil for the transformers, grease, lubricants, paints, solvents, and adhesives. The new Project substation would include transformers, breakers, switches, meters, and related equipment. The decommissioning process and associated equipment would be similar to that of the Proposed Project.

Appropriate spill containment and cleanup kits would be maintained during Project operation. Any hazardous materials that would be stored onsite would be contained in designated areas in accordance with a Hazardous Materials Business Plan. Additionally, Alternative 2 would implement any Best Management Practices (BMPs) required by the National Pollutant Discharge Elimination System (NPDES) Construction General Permit and Stormwater Pollution Prevention Plan (SWPPP), including containment and spill response measures. These BMPs would reduce the potential impact from upset and accident conditions to a less-than-significant level.

Hydrology and Water Quality

Because Alternative 2 is located in the same geographical area as the Proposed Project, impacts related to hydrology and water quality, including impacts to water quality standards, groundwater supplies, drainage, runoff, and flooding, would be similar to that of the Proposed Project. Alternative 2 would be subject to compliance with the NPDES General Permit and SWPPP to minimize erosion onsite and reduce or otherwise prevent conditions of erosion and stormwater runoff. By complying with General Construction Permit implementation requirements, which would include the preparation and deployment of a SWPPP, Spill Prevention, Control, and Countermeasure Plan, and associated BMPs, water quality impacts would be temporary and less than significant.

The Project Area is located within Federal Emergency Management Agency (FEMA) Flood Zone X (an area of minimal flood hazard risk) and Zone A (an area where there is a 1 percent chance of flooding in a given year). However, it is not located in the coastal zone or near a large body of water that could be susceptible to seiches, or in a flood hazard zone identified by FEMA; therefore, there is no risk of inundation associated with such hazards.

Land Use and Planning

The Project Area is designated as *Agriculture* in the Fresno County General Plan and is zoned AE in accordance with Fresno County's Zoning Classification. Within the AE zoning district, the County permits utility-scale solar energy uses with a Unclassified Conditional-Use Permit (UCUP). Additionally, the Project parcels are designated as Prime Farmland and are subject to Williamson Act Contracts. These parcels would be converted to non-agricultural use for the lifetime of the Project (at least 35 years). Similar to the Proposed Project, owners of these parcels would be required to petition to cancel the Williamson Act Contracts before development. Project construction, operation, and maintenance are not expected to result in impacts to the chemical composition or the physical properties of onsite soils such that the long-term suitability for agricultural use would be affected. With the UCUP and cancellation of the Williamson Act Contracts, Alternative 2 would be consistent with existing land use and zoning designations and would not conflict with the Williamson Act Contract. This alternative would also adhere to the County's policies for solar project developments as outlined in the Fresno County Solar Facility Guidelines. Impacts to land use and planning would be the same as the Proposed Project and less than significant.

Mineral Resources

As discussed for the Proposed Project, Alternative 2 would result in no impact to mineral resources because no mineral resources are located within the Project Area; therefore, no impacts to mineral resources would occur.

Noise

Under Alternative 2, the Project Area would be reduced by 25 percent, approximately 577.5 acres. A total of 825 acres would encompass all areas of temporary and permanent impacts. Although the Alternative 2 Project Area would be smaller, noise levels due to construction, operations, and decommissioning would be similar to the Proposed Project because the existing sensitive receptors would still exist at the same

distances. The construction phases and equipment required for development of this alternative would be similar to the Proposed Project. Project construction would occur between 7:00 a.m. and 6:00 p.m., Monday through Friday, in compliance with the County's Code. All reasonable efforts would be made to minimize the impact of noise resulting from construction activities, including the implementation of Mitigation Measure NOI-1. With the implementation of Mitigation Measure NOI-1, impacts would be less than significant.

During Project operations, the primary noise sources are the inverters, substation transformer, battery storage Heating, Ventilation, and Air Conditioning (HVAC) units, and battery storage inverters. The substation transformer will be 230 kV rated at 40 megavolt amperes. Under the Proposed Project, operational noise levels were estimated to be 38 A-weighted decibels (dBA) L_{eq} at the nearest Noise Sensitive Area (NSA) which is below the County's Noise Control Ordinance Nighttime limit of 45 dBA. Under Alternative 2, these operational noise sources would also be implemented; therefore, operational noise would be similar.

Groundborne vibration levels, which were calculated for the Proposed Project based on the worst-case vibration producing equipment, are predicted to be 63 vibration decibels (VdB) at the nearest NSA. This is below the minimum vibration level for human perception of 65 VdB. Similar equipment would be used during construction of Alternative 2; therefore, vibration levels are expected to be similar. Impacts related to noise and groundborne vibration would be less than significant.

Population and Housing

Alternative 2, similar to the Proposed Project, would not induce substantial permanent population growth in the area, either directly or indirectly. The construction workforce is anticipated to commute to the site from nearby communities rather than relocate. Therefore, construction, operation, and decommissioning of the Project would not require the construction of any new homes or other infrastructure.

Additionally, even though the Project would increase the availability of electrical energy capacity, this factor alone is not expected to induce substantial population growth. Many factors such as economic conditions, land availability, the availability of water supply and sewer services, and local planning efforts are more likely to impact population growth. Therefore, the energy produced by the Project would not directly or indirectly encourage new development or induce population growth. Impacts would be less than significant.

Public Services

Under Alternative 2, impacts related to fire and police protection services would be similar to the Proposed Project because this alternative would be located in the same geographical area for these service providers. Fire and police protection services are primarily tied to population. Although the Project Area would be smaller under Alternative 2 compared to the Proposed Project, no substantial permanent population growth is anticipated under either alternative. Impacts to police and fire services would be less than significant.

The presence of construction workers would be temporary, and these workers would likely commute from nearby communities. The short-term increased employment of construction workers in the Project Area would not result in a notable increase in the residential population of the area surrounding the Project Area. Accordingly, there would not be a corresponding demand for or use of the local schools, parks, or public facilities. During operations, onsite employees would likely come from an existing local and/or regional labor force. If the maintenance employees are hired from out of the area and relocate to southern Fresno County, the resulting addition of potential families to this area would not result in a substantial increase in the number of users at local schools, parks, or public facilities. Therefore, staff required during operation would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would Project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment, nor result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts during operation would be less than significant.

Recreation

Similar to the Proposed Project, Alternative 2 would not be located within or adjacent to a residential area or within the vicinity of any parks or recreational facilities. As discussed above, the Project would not result in an increase in population within the County; therefore, no new or expanded recreational facilities would be needed. No impacts to recreation would occur.

Transportation

The Project traffic distribution was estimated based on factors such as the panel and racking manufacturer, proximity to cities, common materials like fencing and concrete, hotel locations, and the size of local communities. Due to the smaller Project Area under Alternative 2, there could be a slight reduction in truck trips, construction traffic, operation-related maintenance trips, and decommissioning trips; however, transportation impacts would still be similar to that of the Proposed Project.

There is no established threshold of significance for VMT for non-office, residential, or retail use projects in Fresno County; therefore, the significance of the additional miles traveled due to the Project is evaluated based on FCOG's Regional Transportation Plan/Sustainable Communities Strategy goals, including reduction of GHG emissions, development of multimodal transportation networks, and diversity of land use. Development of Alternative 2 would support California's statutory energy goal of reducing GHGs through development of a source of solar energy and a diversity of land uses. The majority of VMT generated by the Project will occur over a short period of time during construction, after which the Project will generate renewable energy for approximately 35 years and support a sustainable future for Fresno County while generating a low VMT per year. Therefore, Alternative 2 would have a less than significant impact.

Tribal Cultural Resources

As part of the Proposed Project, a record search, pedestrian survey, and Sacred Lands File search were conducted for the Project Area. No tribal cultural resources were identified through these searches, nor

through the County's government-to-government notification and consultation efforts with interested Native American groups conducted pursuant to AB 52. Like the Proposed Project, impacts would be less than significant.

Utilities and Service Systems

Under Alternative 2, the Project Area would be reduced by 25 percent, approximately 275 acres. A total of 825 acres would encompass all areas of temporary and permanent impacts. The Proposed Project would require approximately 120 AF of water for construction, 1 AFY for the operational life of the Project (approximately 35 years), and approximately 136 AF for decommissioning. There is also a 10 AF capacity pond onsite that would be used for construction and operation of the Project. Construction of the Proposed Project would require the pond to be periodically replenished about 2.92 AF per month during the construction period with water pumped from the onsite wells. Because Alternative 2 would have a smaller Project Area, it would result in less water use than the Proposed Project. Impacts would be less than significant.

Wastewater generated during construction would be minimal. No offsite sewage or disposal connections to a municipal sewer system are present within the Project Area, nor are they proposed for this alternative. No new or expanded wastewater facilities would be required. Impacts would be less than significant.

No natural drainages traverse the Project Area. Similar to the Proposed Project, Alternative 2 would alter existing drainage patterns onsite and would implement stormwater retention basins, diversion swales and berms, and rip-rap cutoff trenches to improve the existing runoff conditions. However, grading for drainage and stormwater retention basins would be conducted per County approved grading and drainage plans. Furthermore, this alternative would also comply with NPDES General Construction Permit requirements and implement a SWPPP to minimize the discharge of wastewater during construction. A Water Quality Management Plan would also be implemented to address runoff control. This alternative would not result in the relocation or construction of new or expanded stormwater drainage facilities. Impacts would be less than significant.

As previously described, the Proposed Project would generate up to 171,500,000 kWh of electricity annually and would provide up to 30 MW of battery storage. This would offset onsite operational electricity use and assist State investor-owned utilities in meeting their obligations under State RPS guidelines by providing a renewable energy alternative to the utilities' existing power mix. Under Alternative 2, energy generation would be reduced to approximately 128,625,000 kWh of electricity annually and battery storage would be reduced to approximately 23 MW. Although this alternative would contribute to the State meeting its RPS Program obligations, it would not provide as much renewable energy as the Proposed Project.

No natural gas would be generated under Alternative 2, and it would not require the construction of new or expanded natural gas facilities. Similar to the Proposed Project, telecommunication equipment would be required. The telecommunication line would use both existing poles and new poles, as well as below ground installations. The construction of the new and expanded telecommunication lines would not cause significant environmental effects. Impacts would be less than significant.

Wildfire

Alternative 2 is located in the same geographic area as the Proposed Project, but on a smaller footprint. The wildfire hazard risk within the Project Area is relatively low because it is not located within an SRA or FRA and is outside of areas identified by CAL FIRE as having substantial or very high risk. Therefore, less-than-significant wildfire impacts would occur under Alternative 2 and would be the same as the Proposed Project.

5.5.2.2 Conclusion

Under Alternative 2 (Reduced Intensity Alternative), the magnitude of the aesthetics, agricultural resources, air quality, energy, GHGs, transportation, and utilities and service systems impacts would be incrementally reduced from what was identified for the Proposed Project; however, it would not affect their significance determinations. The same mitigation measures identified for the Proposed Project related to biological resources, cultural resources, geology and soils (paleontology), noise, and tribal cultural resources would be required for Alternative 2 to reduce impacts to less than significant. All other environmental topic areas would have similar impacts when compared to the Proposed Project.

The Alternative 2 would contribute to the Project's objective to construct and operate a solar PV power-generating facility to generate and deliver low-cost, clean renewable energy to the electrical grid operated by PG&E for regional consumption. This alternative would also contribute to meeting the State's resource adequacy needs, its RPS Program obligations, and its AB 32 GHG emission reduction goal. However, Alternative 2 would not provide as much renewable energy as the Proposed Project. Although this alternative would meet all Project objectives, it would not meet those same objectives at the same scale and would not maximize assisting California utilities in meeting resource adequacy needs, meet their obligations under California's RPS Program and assist the State in meeting the AB 32 GHG emissions reduction goal. Additionally, renewable-energy-related job opportunities would be reduced.

5.6 Comparison of Project Alternatives

The following discussion compares the impacts of each alternative with the impacts of the Proposed Project, which is detailed in Chapter 3.0 of this EIR. Table 5-1 compares the impacts of the alternatives, by environmental issue, with those of the Proposed Project, indicating whether it would result in an increase, reduction, or no change in significance of the impact.

Table 5-1. Comparison of Alternatives to the Proposed Project			
Environmental Issue	**Significance of Impact from the Proposed Project**	**Change in Significance of Impact Compared to the Proposed Project**	
		Alterative 1 (No Project)	**Alternative 2 (Reduced Intensity)**
Aesthetics	Less than Significant	Reduced	Reduced
Agriculture and Forestry Resources	Less than Significant	Reduced	Reduced
Air Quality	Less than Significant	Reduced	Reduced
Biological Resources	Less than Significant	Reduced	No Change
Cultural Resources	Less than Significant with Mitigation	Reduced	No Change
Energy	Less than Significant	Reduced	Reduced
Geology and Soils	Less than Significant with Mitigation	Reduced	No Change
Greenhouse Gas Emissions	Less than Significant	Reduced	Reduced
Hazards and Hazardous Materials	Less than Significant	Reduced	No Change
Hydrology and Water Quality	Less than Significant	Reduced	No Change
Land Use and Planning	Less than Significant	Reduced	No Change
Mineral Resources	No Impact	No Change	No Change
Noise	Less than Significant with Mitigation	Reduced	No Change
Population and Housing	Less than Significant	No Change	No Change
Public Services	Less than Significant	No Change	No Change
Recreation	No Impact	No Change	No Change
Transportation	Less than Significant	Reduced	Reduced
Tribal Cultural Resources	Less than Significant with Mitigation	Reduced	No Change
Utilities and Service Systems	Less than Significant	Increased	Reduced
Wildfire	Less than Significant	No Change	No Change

5.7 Environmentally Superior Alternative

The environmentally superior alternative is generally defined as the alternative that would result in the least adverse environmental impacts in the Project Area and surrounding area. Alternative 1 (No Project) would be environmentally superior because it would avoid or lessen impacts associated with aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, and tribal cultural resources when compared to the Proposed Project; however, this alternative would not meet any of the Project objectives. Impacts related to utilities and service systems would increase when compared to the Proposed Project because the demand for water to maintain the existing agricultural use on the sites is significantly greater than what would be needed for the Proposed Project.

CEQA Guidelines (Section 15126.6[e][2]) requires that if the environmentally superior alternative is the *no project* alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Although Alternative 2 (Reduced Intensity) would reduce the magnitude of some impacts, including aesthetics, agricultural resources, air quality, energy, GHGs, transportation, and utilities and service systems, the significance determination of each would be the same compared to the Proposed Project. The same mitigation measures identified for the Proposed Project related to biological resources, cultural resources, geology and soils (paleontology), noise, and tribal cultural resources would be required for Alternative 2 to reduce impacts to a less than significant level. Alternative 2 would contribute to each of the Project's objectives; however, it would generate less renewable energy and contribute less than the Proposed Project.

The Proposed Project would have no impact or a less-than-significant impact to aesthetics, agriculture and forestry resources, air quality, energy, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire and would meet all of the Project objectives. All remaining environmental impacts would be less than significant with mitigation. As such, the Proposed Project would be the environmentally superior alternative because it would include the benefits of the Project objectives to the County and the region.

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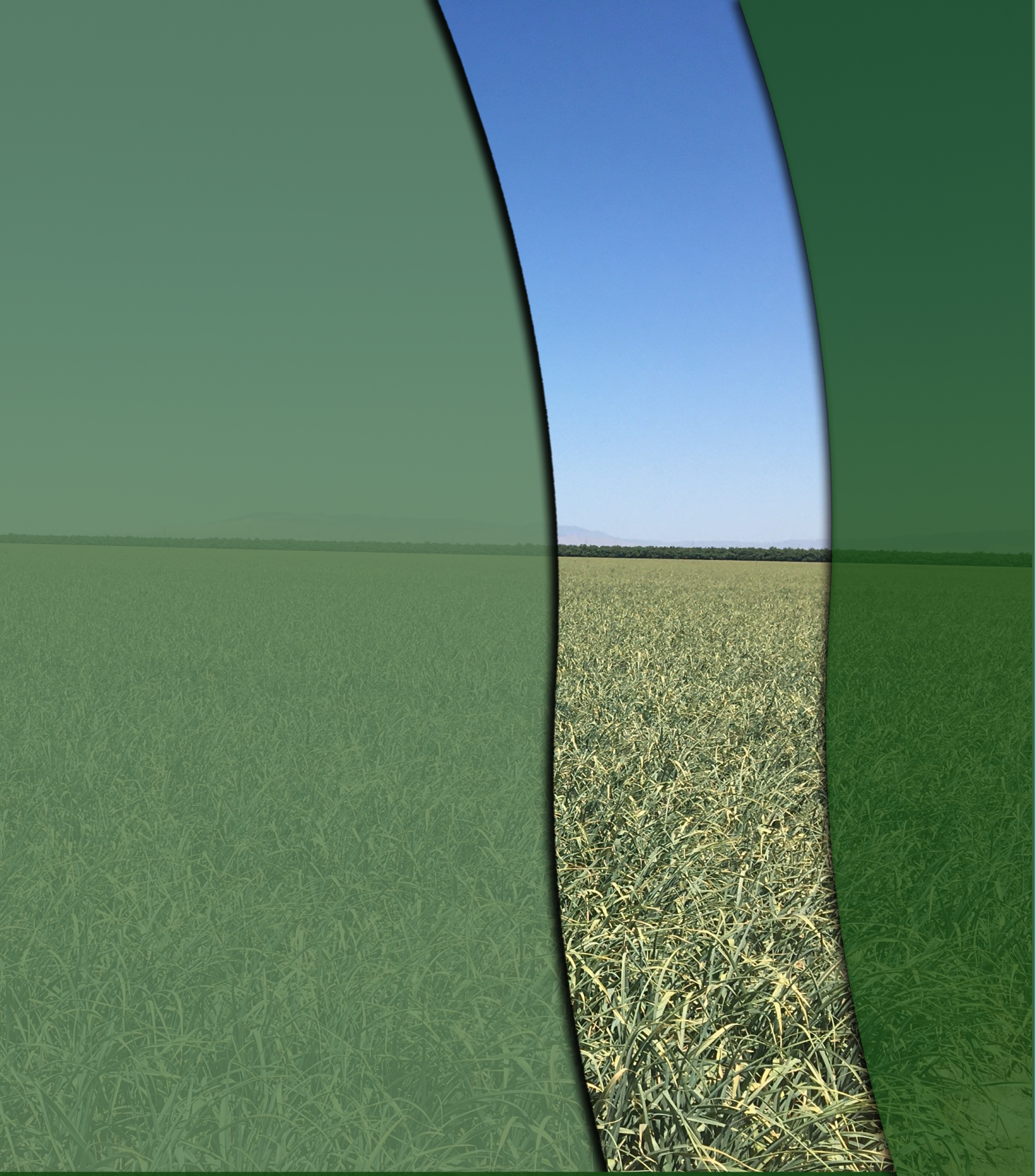

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