# INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THE ESTRELLA SOLAR PROJECT

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# Acronyms and Abbreviations

| ACRO | Definition |
|---|---|
| µg/m$^3$ | micrograms per cubic meter |
| AB | Assembly Bill |
| AB 52 | Assembly Bill 52 |
| AERMOD | American Meteorological Society/Environmental Protection Agency Regulator Model |
| AVAQMD | Antelope Valley Air Quality Management District |
| AVEK | Antelope Valley – East Kern Water Agency |
| Basin | Antelope Valley Groundwater Basin |
| BESS | battery energy storage system |
| BGEPA | Bald and Golden Eagle Protection Act |
| BMPs | Best Management Practices |
| BMS | battery management system |
| CAAQS | California Ambient Air Quality Standards |
| CAISO | California Independent System Operator |
| CAL FIRE | California Department of Forestry and Fire Protection |
| Cal/OSHA | California Division of the Occupational Safety and Health Administration |
| CalEEMod | California Emissions Estimator Model |
| CARB | California Air Resources Board |
| CCAP | Community Climate Action Plan |
| CCR | California Code of Regulations |
| CDC | California Department of Conservation |
| CDFW | California Department of Fish and Wildlife |
| CDNPA | California Desert Native Plants Act |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFGC | California Fish and Game Code |
| CGS | California Geological Survey |
| $CH_4$ | methane |
| CNDDB | California Natural Diversity Data Base |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| COD | Commercial Online Date |
| CRA | Cultural Resources Assessment |
| CUP | Conditional Use Permit |
| CWA | Clean Water Act |
| DMG | Division of Mines and Geology |
| DOGGR | Division of Oil, Gas, and Geothermal Resources |
| DPM | Diesel particulate matter |
| DTSC | California Department of Toxic Substances Control |

| ACRO | Definition |
|---|---|
| DWR | California Department of Water Resources |
| EKAPCD | Eastern Kern Air Pollution Control District |
| ESA | Environmental Site Assessment |
| FCAA | Federal Clean Air Act |
| FEMA | Federal Emergency Management Agency |
| FMMP | Farmland Mapping and Monitoring Program |
| Gabrieleno Band | San Gabriel Band of Mission Indians |
| General Plan | County General Plan |
| gen-tie | generation-tie |
| GHG | greenhouse gas |
| GWP | global warming potential |
| HFCs | hydrofluorocarbons |
| HRA | health risk assessment |
| IS | Initial Study |
| kV | kilovolt |
| LACDPH | Los Angeles County Department of Public Health |
| LACDPW | Los Angeles County Department of Public Works |
| LACDRP | Los Angeles County Department of Regional Planning |
| LACFD | County Fire Department |
| LACSD | Los Angeles County Sheriff's Department |
| LID | Low-Impact Development |
| MBTA | Migratory Bird Treaty Act |
| MDAB | Mojave Desert Air Basin |
| MM | Mitigation Measure |
| MRZ-3 | Mineral Resource Zone 3 |
| MW | megawatts |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standard |
| NAHC | Native American Heritage Commission |
| National Register | National Register of Historic Places |
| NO2 | nitrogen dioxide |
| NPDES | National Pollutant Discharge Elimination System |
| $O_3$ | ozone |
| OEHHA | Office of Environmental Health Hazard Assessment |
| Pb | lead |
| PCS | Power Conditioning System |
| PFCs | perfluorocarbons |
| PM | particulate matter |
| $PM_{10}$ | PM less than or equal to 10 microns in diameter |
| $PM_{2.5}$ | PM less than or equal to 2.5 microns in diameter |
| PRC | Public Resources Code |
| PRMMP | Paleontological Resources Mitigation and Monitoring Plan |
| PV | photovoltaic |

| ACRO | Definition |
|---|---|
| REC | Recognized Environmental Concern |
| ROW | rights-of-way |
| RPS | Renewable Energy Portfolio Standards |
| RWQCB | Regional Water Quality Control Board |
| SB | Senate Bill |
| SCADA | Supervisory Control or Data Acquisition |
| SCCIC | South Central Coastal Information Center |
| SCE | Southern California Edison |
| $SF_6$ | sulfur hexafluoride |
| SIL | Significant Impact Level |
| SIP | State Implementation Plan |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SMBMI | San Manuel Band of Mission Indians |
| $SO_2$ | sulfur dioxide |
| SR | State Route |
| SSC | Species of Special Concern |
| SSJVIC | Southern San Joaquin Valley Information Center |
| ST | State Threatened |
| SWPPP | Stormwater Pollution Prevention Plan |
| TIA | Transportation Impact Analysis |
| USDA-NRCS | U.S. Department of Agriculture, Natural Resources Conservation Service |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | United States Geological Survey |
| USTs | Underground Storage Tanks |
| VMT | Vehicle Miles Traveled |
| WSA | Water Supply Assessment |
| WSC | Western Science Center |

# Chapter 1
# Introduction

## 1.1 Purpose

This Initial Study (IS) Checklist has been prepared for the proposed project in accordance with the California Environmental Quality Act (CEQA), California Public Resources Code (PRC) Sections 21000 et seq., Los Angeles County Environmental Review Guidelines, and associated State CEQA Guidelines, California Code of Regulations (CCR) Title 14, Sections 15000 et seq. This IS Checklist includes a description of the proposed project and surrounding land uses, evaluation of the potential environmental impacts of the project, and recommended mitigation measures to reduce such impacts to a less than significant level. A biological resources technical report, jurisdictional delineation, air quality/greenhouse gas/health risk analysis, noise analysis, traffic analysis, and cultural resources technical report have been prepared for the proposed project, and the results of these studies are incorporated into this IS Checklist. The goal of this IS Checklist is to be used by the Los Angeles County (County) to support a determination that a Mitigated Negative Declaration should suffice for the proposed approximately 148.8-acre solar project. The County is the lead agency for the project and would have the principal responsibility for approving the project. AES is the project applicant and is proposing the project that is analyzed in this IS Checklist.

## 1.2 Summary of Findings

Chapter 3, California Environmental Quality Act Checklist, of this document discusses the potential environmental impacts of the proposed project and the recommended mitigation program, including mitigation measures that would reduce all potential impacts to levels considered less than significant. According to Section 15370 of the State CEQA Guidelines, "mitigation" includes the following:

(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

Implementation of the proposed project would result in potentially significant impacts on aesthetics, agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, noise, and tribal cultural resources prior to implementation of mitigation measures. Implementation of the mitigation measures, as detailed in each environmental analysis presented in Chapter 3 of this IS Checklist, would reduce all potentially significant impacts to a less than significant level.

## 1.3 Outline of Initial Study Checklist

This IS Checklist is organized in the following chapters:

- Chapter 1, Introduction, provides an introduction to the IS Checklist process.
- Chapter 2, Environmental Setting and Project Description, provides a description of the project location, the environmental setting of the project site and vicinity, and the proposed project itself.
- Chapter 3, California Environmental Quality Act Checklist, provides the potential environmental impacts of the project, including:
  a. environmental setting for individual resource topics
  b. analyses of identified environmental impacts
  c. mitigation measures that would mitigate potential significant effects to a less than significant level

Chapter 2
# Environmental Setting and Project Description

## 2.1 Site Location

The project site is located in the northern portion of unincorporated Los Angeles County within the western portion of Antelope Valley (see Figure 2-1, Regional Vicinity). The project site is bounded by West Avenue A-8 on the south, West Avenue A on the north, 95th Street West on the west, and 90th Street West on the east (see Figure 2-2, Project Location). The proposed generation-tie (gen-tie) line extends south for approximately 9 miles along public rights-of-way (ROW) and a few privately owned parcels. It connects to the Big Sky North substation, northeast of the intersection of 100th Street West and Avenue G-8, within the City of Lancaster.

The project is approximately 50 miles north of downtown Los Angeles. Regional access to the project site is provided by the Antelope Valley Freeway (California State Route [SR] 14), exiting at Avenue A, then proceeding west (see Figure 2-3, Local Vicinity).

The project site is located in unincorporated Los Angeles County and designated as RL10 (Rural Land 10) according to the Los Angeles County Antelope Valley Area Plan: Town & Country (LACDRP 2015a). The project site is zoned "A-2-2" (Heavy Agricultural – 2 Acre Minimum Required Lot Area) in the County Zoning Ordinance (LACDRP 2015a) as shown in Figure 2-4, Existing Land Use and Zoning. Pursuant to the County Code of Ordinances (County Code), a ground-mounted utility-scale solar energy facility ("solar facility") is an allowed use in the A-2 Zone and requires a conditional use permit (CUP) (LACDRP 2015b).

## 2.2 Site Characteristics

The project site encompasses approximately 148.8 acres of previously disturbed agricultural land within the western Antelope Valley in rural, unincorporated Los Angeles County. The project site is undeveloped and is located within two identified County Assessor's Parcel Numbers (3262-006-002 and 3262-006-003). The project site is relatively flat, with a maximum elevation of approximately 2,450 feet above mean sea level at the intersection of 95th Street West and West Avenue A-8 and a minimum elevation of approximately 2,440 feet above mean sea level at the intersection of West Avenue A and 90th Street West. The project site has no habitable buildings, structures, or development. Figures 2-5 through 2-8 depict current site conditions. Roadways to the north and east (West Avenue A and 90th Street West), are paved County roads, and roadways to the south and west (West Avenue A-8 and 95th Street West) are unpaved County roads. All roadways surrounding the project site are public streets. 90th Street West is classified as a Major Highway; West Avenue A is classified as a Major Highway east of 90th Street West and as a Secondary Highway west of 90th Street West; and 95th Street West and West Avenue A-8 are classified as local streets (LACDRP 2016). Kern County lies directly north of the project site, along West Avenue A.

**Figure 2-1. Regional Vicinity**

**Figure 2-2. Project Location**

**Figure 2-3. Local Vicinity**

**Figure 2-4. Existing Land Use and Zoning**

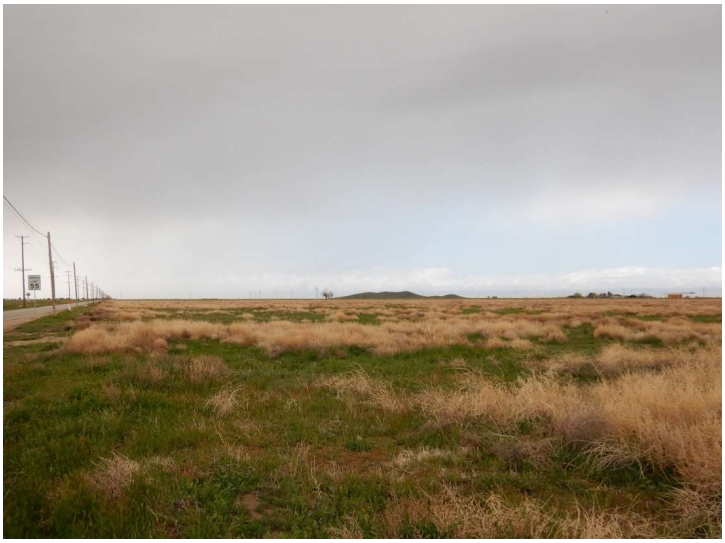

**Figure 2-5. Existing Conditions: View of the Northeastern Portion of the Site Looking South along 90th Street West**

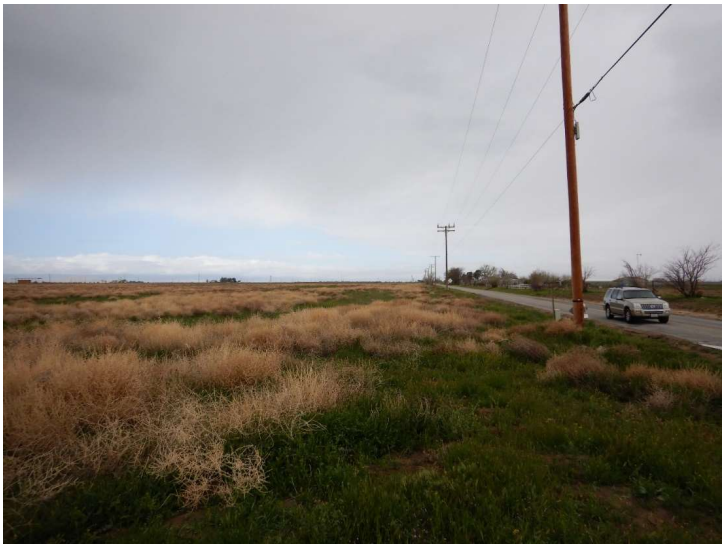

**Figure 2-6. Existing Conditions: View of the Northeastern Portion of the Site Looking West along West Avenue A**

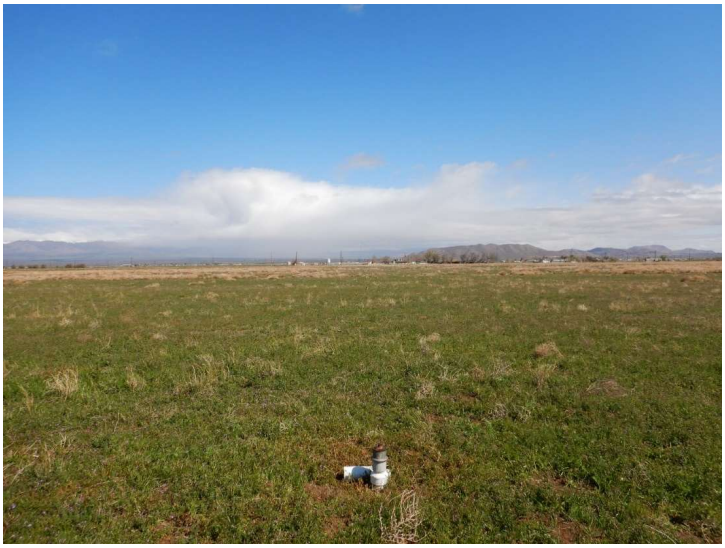

**Figure 2-7. Existing Conditions: View of the Central Portion of the Site Looking North**

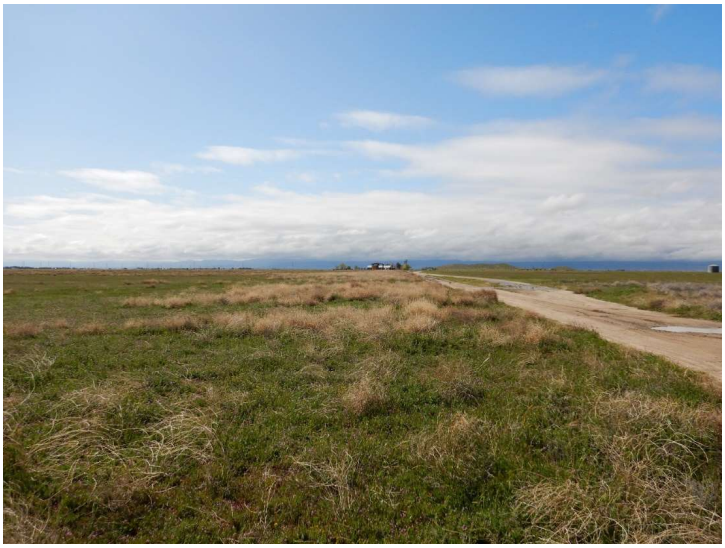

**Figure 2-8. Existing Conditions: View of the Northwestern Corner of the Site Looking South along 95th Street West**

## 2.3 Surrounding Land Uses

Southern California Edison (SCE) owns and operates several transmission and sub-transmission lines in the project vicinity. Specifically, there is a 66-kilovolt (kV) sub-transmission line on the eastern side of 90th Street West. A 500-kV transmission line, 220-kV transmission line, and 66-kV sub-transmission line run south to north, approximately 1 mile west of the project site (SCE 2020).

The County of Los Angeles Antelope Valley Area Plan designates the project site and surrounding areas to the west, south, and east as Rural Land (LACDRP 2015a). Kern County lies directly north of the project site, along West Avenue A. Land adjacent to the project site in Kern County is designated as Suburban Residential and Light Industrial (Kern County 2020). Several residences are located adjacent to the project site. A residence and agricultural structures are located directly adjacent to the southwest portion of the project site, and approximately three residences and an equestrian facility are located to the north along West Avenue A. Additionally, a residence is located approximately 450 feet from the project site, southwest of the intersection of West Avenue A-8 and 95th Street West. The nearest residential communities are Antelope Acres, the Fairmont community, the City of Lancaster, and the City of Palmdale. Land uses surrounding the project site consist of mainly open space areas, light agricultural land, low-density single-family housing, and undeveloped grazing lands. Historically, agriculture has been a primary land use in the Antelope Valley. The surrounding landscape is primarily dominated by fallow agricultural land. South of the Antelope Valley in the San Gabriel Mountains is the Angeles National Forest.

## 2.4 Project Description

The Estrella Solar Project (proposed project) involves the construction of a ground- mounted utility-scale solar energy facility (solar facility) and optional battery energy storage system (BESS) pursuant to Sections 22.16.030.D and 22.140.510 of the County Code. The proposed project would employ photovoltaic (PV) modules that convert sunlight directly into electrical energy without use of heat transfer fluid or cooling water. The proposed project would have a generating capacity of up to 21 megawatts (MW) of alternating current, and up to 28 MW of energy storage capacity.

The power generated by the project will be discharged onto the SCE grid via one of three options described in the *Generation Tie-Line* section below.

The project would occupy approximately 145 acres of the 148.8-acre site and the facility would generate, charge, store and discharge renewable, emission-free electricity during the highest electricity demand time periods. The project would operate year-round, generating electric power during daylight hours and discharging stored electric power at night.

The major components of the proposed project are as follows:

- A solar field of north-south rows of PV panels, mounted on either fixed-tilt or single-axis tracking systems on steel support structures.
- An electrical collection system. PV modules would be electrically connected into strings, and each string would be funneled by underground electrical conduit to combiner boxes located throughout the solar field power blocks. Cables from the combiner boxes would again be consolidated to feed the direct current electricity into inverters which convert the DC to AC.

- Battery storage technology that uses telecommunication systems and real-time control software to charge and discharge the battery according to power delivery needs.
- A switchgear area for the transformer equipment, control building foundation, and oil containment area.
- A data collection system to remotely monitor the facility operation and/or remotely control critical components.
- Civil infrastructure, such as paved driveways, internal 20-foot-wide access roads, security fencing, landscaping, and two 5,000-gallon water tanks.
- Interconnection gen-tie line installed either overhead or underground to connect the project to the SCE grid via one of two options.

These components are described below and depicted on Figure 2-9, Site Plan. The project applicant will obtain a CUP prior to implementation of the proposed project.

## 2.4.1 Solar Field

The project solar field would consist of PV panels mounted on steel support structures. The supports would be configured with either a fixed-tilt or a pivoting, single-axis tracking system. Fixed-tilt modules would be oriented toward the south and angled at a degree that would optimize solar resource efficiency. Tracking modules would rotate from east to west over the course of the day. The assembled PV panels would have a maximum vertical height of approximately 10 feet, depending on the angle of the tracking system as it changes over the course of each day. The PV panels would consist of polycrystalline silicon or thin film panels, which would be arranged in rows with center-to-center spacing of approximately 10 to 25 feet. The mounting poles for the panels would be approximately 6 inches in diameter, and the modules would be nonreflective and highly absorptive.

## 2.4.2 Electrical Collection System

The PV panels would be organized into electrical groups referred to as "blocks" to allow adequate clearance for access roads and adequate access for maintenance. Each block consists of PV panels capable of producing about 2 to 4 MW and would include an equipment pad containing one or more inverters and transformers. The inverter-transformer equipment pads would be prefabricated or assembled on site. Each inverter would be fully enclosed, be pad- or skid-mounted, and stand approximately 114 inches (9 feet, 6 inches) in height. Inverters would be consolidated in areas to minimize cable routing, trenching, and minimal electrical losses. The AC output from the inverters would be routed through an AC collection system and consolidated within system switchgear. The final output from the project would be processed through a transformer to match the interconnection voltage. The transformers would be approximately 87 inches (7 feet, 3 inches) high, pad-mounted, and enclosed with a switchgear and a junction box. Electrical safety and protection systems would be provided to meet utility, California Independent System Operator (CAISO), and regulatory codes and standards.

**Figure 2-9. Site Plan**

## 2.4.3 Battery Storage

Energy storage would include an on-site intelligent battery energy storage system (BESS). The major electrical equipment includes battery modules and power conversion equipment. The battery modules would be racked (akin to server racks) within modular, external access-only containers that would connect to associated electrical equipment. The battery containers would be thermally managed with robust cooling systems to maintain specific operating temperatures, and the BESS operations would be controlled and monitored remotely by AES via a Supervisory Control or Data Acquisition (SCADA) platform (described below). The BESS will be designed in accordance to the latest applicable codes and safety certifications (i.e., UL, NFPA, NEC, IEEE) for the design, construction, and operations of the facility, and the entire BESS area would be fenced for security and to restrict access.

The primary storage components would consist of self-contained lithium-ion battery systems that leverage the same conventional storage technologies (and vendors) as the batteries in a typical cell phone, laptop computer, or electric vehicle. The battery storage facility is designed such that the periodic maintenance and replacement of the underperforming battery components (each a single "module") can be easily performed on an as-needed basis, whereby each individual module can be replaced without needing to replace the entire system. The BESS modules and associated infrastructure (e.g., inverters, switches, etc.) would be serviced regularly via planned maintenance according to the manufacturer recommendations and on an as-needed basis by certified technicians.

The battery will be rechargeable and will be specifically selected and designed to perform the required operations (i.e., approximately 1 cycle per day and 365 cycles per year) within critical safety parameters beyond the planned operations for this facility.

DC electricity would be collected from the batteries and conveyed to the inverters. A series of battery modules forms a battery "rack," and each rack is connected to a battery management system (BMS) to control that specific rack and control the voltage, current, and other operations. Several series circuits are combined to form an individual parallel circuit; parallel circuits are grouped together in individual racks which are sized appropriately, and each rack contains a rack-level BMS. The number of racks will vary according to the final proposed project specifications and will be sized to accommodate the electrical design. Racks combine multiple parallel circuits through a fused bus system to collect the energy into one set of DC collection cables. The fuses within the racks create another line of protection from overcurrent. These cables run from the racks to the inverters, where they would terminate in the DC side of the inverter.

Typical modular energy storage solutions are approximately 8 to 10 feet in height. If the BESS option is included in the final design, the approximately 2-acre BESS area will be located in the southeast corner of the site.

## 2.4.4 Switchgear Area

The switchgear area would be excavated for the transformer equipment, control building foundation, and oil containment area. Reinforced concrete would be used for foundations. Structural components in the switchgear areas would include:

- Transformers, switchgear, and safety systems
- Footings and oil containment system for transformers

The transformer would be approximately 87 inches in height and would be pad-mounted and enclosed together with switchgear and a junction box. The high-voltage output of the transformer would be combined in series via underground collector cable to the junction box of the closest transformer. Distances can range from 60 to 700 feet throughout the project site. The collector system cables would be tied at underground junction boxes to the main underground collector cables, composed of a larger gauge wire, to the location of the generator step-up transformer. The main collector cables would rise into the low-voltage busbar and protection equipment that is enclosed together with the generator step-up transformer. The primary switchgear includes the main circuit breaker and utility metering equipment, and it would be enclosed separately and pad-mounted together with the generator step-up transformer. The output of the switchgear would be the start of the gen-tie.

## 2.4.5 Generation-Tie Lines

The power generated by the proposed project would be discharged onto the SCE grid via one of two options: 1) use a shared gen-tie corridor down 110th Street West that is already undergoing CEQA review with Kern and LA Counties; or 2) "tap" the existing SCE 66-kV line immediately east of the project site, along the eastern shoulder of 90th Street West (Figure 2-10, Gen-Tie Options). Option 1 would ultimately connect to the existing Big Sky North substation via 34.5-kV, 66-kV or 230-kV lines. AES has been coordinating closely with the County's Department of Public works on this shared corridor. A transformer will be added to Big Sky North substation to accommodate the project. The gen-tie line would be located underground surrounding the project site and extending west, but at 110th Street West, the gen-tie line would be located overhead (Figure 2-10, Gen-Tie Options). The gen-tie would be built simultaneously with the solar facility with completion at the end of 2022.

## 2.4.6 Supervisory Control or Data Acquisition System

A data collection system would be designed to remotely monitor the facility operation and/or remotely control critical components. The fiber optic or other cabling would be installed throughout the solar field to a centrally located SCADA system. The SCADA system would also collect meteorological information for the project site.

**Figure 2-10. Gen-Tie Options**

## 2.4.7 Civil Infrastructure

### 2.4.7.1 Driveways and Access Roads

As depicted on Figure 2-9, Site Plan, the project would contain one access point along 90th Street West, with a 50-foot-wide gate. The driveway would provide access for emergency vehicles and for maintenance and operation purposes. There would be two 5,000-gallon water tanks along the driveways, which would be clearly labeled for "Fire Department Use Only." Network access roads (20 feet wide) would also be provided around the perimeter and throughout the project site in compliance with applicable County Fire Department (LACFD) design requirements.

### 2.4.7.2 Security Fencing

The project site would be surrounded by an 8-foot-tall galvanized chain-link fence topped with 1 foot of three- strand barbed wire, for a total fence height of 9 feet. "Warning High Voltage" signs would be placed along the fencing at regular intervals and at each gate pursuant to County and/or state requirements. The fencing would be secured with concrete footings and would have intermittent 12-inch openings along its foot for animal crossings.

### 2.4.7.3 Lighting

Lighting would be installed at each site entrance of the project site for nighttime security purposes and at the switchgear area for maintenance purposes. Any lighting would consist of modern, low-intensity, downward-shielded fixtures that are motion-activated, and would be directed onto the project site. Motion detectors would be set at a sensitivity level that could not be triggered by small animal movement. The proposed project would comply with the County Code Chapter 22.140.510.E, Renewable Energy – Utility-Scale Solar Energy Facilities, in addition to the requirements of the Rural Outdoor Lighting District Ordinance (Ordinance No. 2012-0047).

### 2.4.7.4 Landscaping

Outside of the security fence, an approximately 10-foot-wide landscaping buffer would be installed along the 90th Street West and West Avenue A frontages. A Landscape Plan would be prepared and is subject to review and approval by the County. The landscaping would partially obscure and screen views into the project site from paved, well-travelled, major roads. All shrubs would be manually irrigated three times a week for a 90-day maintenance period or until successfully established. No long-term irrigation infrastructure is proposed; however, the landscaping would be maintained as needed during the life of the project and would be monitored monthly.

# 2.5 Construction

Project construction would consist of two major phases: (1) site preparation and grading, and (2) PV system/BESS installation.

## 2.5.1 Site Preparation and Grading

Construction of the project would begin with initial clearing and grading (if required) of the onsite staging areas. Access to the project site would be improved to appropriate construction standards.

The onsite staging areas would typically include construction offices, a first aid station and other temporary buildings, worker parking, truck loading and unloading facilities, and an area for assembly. Road corridors would be surveyed, cleared, and graded to bring equipment, materials, and workers to the areas under construction. Buried electrical lines, PV array locations, and the locations of other facilities may be flagged and staked to guide construction activities.

The project site would be surrounded by a security fence. A secure controlled main access gate would be located at the entrance. A temporary landscape green fabric would be attached to the chain-link fence during construction.

Best Management Practices (BMPs) such as straw wattles, use of hydroseeding, and wind screening for erosion control during site preparation would be employed.

#### 2.5.1.1 Grading Parameters

The project site is relatively flat, with an approximately 10-foot change in elevation (0- to 2-percent slope). Grading and ground disturbance for the project would be minimal and primarily limited to access roads, equipment pads (including inverter-transformer pads, BESS and project switchgear), trenching for gen-tie lines, stormwater detention basins, and water tanks. To the greatest extent feasible, AES would maintain existing vegetation through mowing to a maximum height of 6 inches. Soil disturbance would be minimized to reduce the amount of revegetation. For areas requiring significant disturbance, AES would implement and maintain hydroseeding as soon as possible to establish and stabilize soils.

The trench for the underground gen-tie line would be approximately 3 feet wide by 4 feet deep and approximately 8.5 miles long. Gen-tie line trenching would require up to approximately 538,560 cubic feet (19,947 cubic yards) of balanced cut and fill.

The solar arrays would be installed using pile-driving techniques, rather than excavating, to minimize soil disturbance. The project site is very flat; therefore, grading would be minimal and would result in a balanced cut/fill on site. Grading would be limited to access roads, utility boxes, trenching, and Low-Impact Development (LID) features. Total estimated earthwork quantities are approximately 35,775 cubic yards of cut and 35,775 cubic yards of fill, balanced onsite. The existing vegetation in all other areas of the project site would be mowed to a maximum height of 6 inches, per LACFD requirements. Minor trenching would be required to electrically connect all project components and to connect the gen-tie line to the Big Sky North Substation.

The proposed project would be required to comply with Antelope Valley Air Quality Management District (AVAQMD) Rule 403, Fugitive Dust, as a standard condition, which requires implementation of a Dust Control Plan (AVAQMD 2005). The Dust Control Plan would include strategies such as minimal grading and ground disturbance, and application of soil stabilizers.

**Commented [BM1]:**

**Commented [DP2R1]:** Provided worst case scenario cut/fill, but it should be noted that it's looking more and more like we can't feasibly construct it underground due to engineering and spatial constraints.

**Commented [PE3R1]:** Please provided updated figures.

**Commented [SC4]:** Specify approximate grading amount for cut and fill, and approximate depth for excavation.

**Commented [DP5R4]:** Added grading estimates.

## 2.5.2 PV System Installation

PV system installation would include earthwork, grading, and landscaping, as well as erection of the PV modules, supports, and associated electrical equipment. System installation would begin with teams installing the mounting and steel pier support structures. This would be followed by installation of module rail assemblies, PV modules, inverters, transformers, and buried electrical cables. The exact design would be finalized pending specific soil conditions. The foundation would

include pile-driven H-piles that would be up to 10 feet deep. This would be followed by panel installation and electrical work.

Concrete may be required for the footings and foundations; it would be required for the transformer pads. Concrete would be produced at an off-site location by a local provider and transported to the project site by truck. The enclosures housing the inverters would have either pre-cast steel bases mounted and welded onto driven piles, or pre-cast concrete bases placed onto compacted earthen pads. Final specifications would be determined during detailed design engineering and would meet applicable building codes.

The PV modules require a moderately flat surface for installation. Some earthwork, including grading, fill, compaction, and erosion control cultivation may be required to accommodate the placement of PV arrays, foundations or footings, access roads, and drainage features. Control of erosion during construction would be determined by a California-Qualified Stormwater Pollution Prevention Plan (SWPPP) Developer (QSD).

Landscaping would be installed and watered during the construction of the PV system. Shrubs would be manually watered several times weekly by a water truck with a hose connection. The landscape contractor is responsible for maintaining all plantings until the landscaping is established or for a period of up to 90 days after the completion of construction.

Wastes that would be generated during construction may include cardboard, wood pallets, copper wire, scrap steel, common trash, and wood wire spools. AES does not expect to generate hazardous waste during construction of the proposed project. However, field equipment used during construction would contain various hazardous materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, and other petroleum-based products contained in construction vehicles.

### 2.5.3 Battery Storage Installation

AES anticipates that the battery storage containers would be constructed on concrete pads, and each container would be bolted to meet or exceed the seismic requirements applicable to the County. The Power Conditioning System (PCS) and the medium voltage control system (i.e., inverters and transformers) would similarly be constructed on level concrete pads between the battery storage containers. Minor rough grading may be needed for the preparation of the battery containers, PCS, and medium voltage control system pads if the pads cannot be constructed using the existing slope. Any cut-and-fill as a result of any rough grading would be contained within the proposed project site. No import or export of soil from the proposed project site would be required.

### 2.5.4 LID Management

AES would provide post-construction storm water management with a variety of LID BMPs provided by the County LID Standards Manual that treat post-construction storm water runoff. Details on LID BMPs would be provided following the completion of the Drainage Report.

### 2.5.5 Construction Schedule

Construction of the proposed project is anticipated to start in or around the end of Q4 2021 and would last up to 11 months, until Q4 2022 at the latest, with Commercial Online Date (COD) in Q4 2022.

Construction is anticipated to occur up to five days per week. Site preparation and grading would require approximately 60 days, while the PV system installation would last approximately 180 days.

### 2.5.6 Construction Workforce

The project would generate approximately 75 jobs during the construction phase, including on-site workforce, which would consist of laborers, various skilled trades, supervisory personnel, support personnel, and construction management personnel.

The project would provide a mobile sanitation facility for workers during the construction period. Sanitation facilities and potable water would be provided per the California Division of the Occupational Safety and Health Administration (Cal/OSHA) standards and regulations, and they would be maintained in a safe and sanitary condition so as not to constitute a public hazard or nuisance. Waste generated by the mobile sanitation facility would be disposed of and treated per County regulations. Since the project is unmanned, mobile sanitation and drinking water facilities would not be required during the operations phase.

### 2.5.7 Construction Water Use

Approximately 53 acre-feet of water would be required during construction, with actual consumption strongly dependent upon climatic conditions. Construction water needs would be limited to soil conditioning and dust suppression. Bottled water would be brought to the project site for drinking and domestic needs.

There are no sources of piped recycled water or piped potable water within 1 mile of the project site. A Water Supply Assessment (WSA) has been prepared for the proposed project to evaluate the water supply under normal year, single dry year, and multiple dry year conditions over a 20-year projection, accounting for the projected water demand of the proposed Estrella Solar Project, in addition to other existing and planned future uses of the identified water supplies (ICF 2020). Based on the WSA evaluation, adequate water supplies for the construction demand are available under normal water year conditions. The primary source of proposed project water supply would be imported surface water or groundwater from a local water wholesaler, Antelope Valley – East Kern Water Agency (AVEK).

## 2.6 Operation

Upon commissioning, the project would enter the operational phase. For the duration of the operational phase, the project would be monitored remotely, and staff would regularly visit the project site for security, maintenance, and system monitoring. There would be no full-time site personnel on site during operation. As the project's PV arrays produce electricity passively with minimal moving parts, maintenance requirements would be limited. Any required planned maintenance would be scheduled to avoid peak load periods, and unplanned maintenance would be typically responded to as needed depending on the event. An inventory of spare components would be readily available from a remote warehouse facility.

### 2.6.1 Maintenance

Project maintenance on site would consist of equipment inspection and replacement. Maintenance would occur during daylight hours, when possible. However, maintenance activities on the PV modules and DC systems would be typically performed at night. Maintenance program elements include the following:

- Managing a group of prequalified maintenance and repair firms who can meet the operational and maintenance needs of the facility throughout its life
- Implementing a responsive, optimized cleaning schedule
- Responding to plant emergencies and failures in a timely manner
- Maintaining an inventory of spare parts to ensure timely repairs and consistent plant output
- Maintaining a log to effectively record and track all maintenance problems
- Performing maintenance on the project site as required to clear obstructive ground cover

### 2.6.2 Security

To ensure the safety of the public and the facility, the property would be fenced and posted with signage. Security measures would be installed as necessary to deter unauthorized access. Access to the project site would be controlled and a gate would be installed at the road entering the property.

### 2.6.3 Operational Water Use

During the operational phase, solar PV plants require minimal water use. PV panels would require cleaning zero to two times per year to remove dust buildup, grime, bird droppings, and/or soot, typically (but not exclusively) with demineralized water. Water would infiltrate into the ground or evaporate. The annual water consumption for operation of the facility, including periodic PV module washing and landscape maintenance, is expected to be approximately 1.02 acre-feet. The amount of water per year would vary depending on annual rainfall, and wind and dust in the project area. Because solar panels are susceptible to damage and become inefficient with the use of poor-quality water, the purchase of high-quality water or the process of filtering water on site for operational use may be necessary. As described above, sources of water may include off-site wells, recycled water, or water trucked in from the local municipality.

## 2.7 Decommissioning

At the end of the life cycle of the project (approximately 35 years), AES would decommission and remove the system and its components unless it is determined that the solar energy generation uses shall continue. Upon decommissioning of the project site's solar energy uses, the site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. A farmland restoration component would be included in the project's Decommissioning Plan to ensure that agriculture would be feasible at the project site if water becomes available in the future. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, state and County regulations. A collection and recycling program would be executed to dispose of the site materials.

Details of proposed decommissioning activities and costs would be prepared and submitted in a Decommissioning Plan to the County.

## 2.7.1 Equipment Removal and Disposal

All aboveground PV, electrical equipment, and supporting structures would be removed using conventional construction equipment and tractor trailers for hauling from the project site. Electrical equipment of monetary value, such as solar panels, transformers, and inverters, would be resold at future market rates. The majority of the equipment would be transported to an off-site recycling center. Items not able to be recycled would be disposed of in accordance with state and local regulations.

Non-PV/electrical equipment such as the water storage tanks, fencing, and other items would be recycled, if applicable, at the time of decommissioning. Otherwise, these items would be disposed of in accordance with state and local regulations.

## 2.7.2 Site Restoration

### 2.7.2.1 Pre-Construction Documentation

To adequately restore the project site to its previous condition, pre-construction conditions would be documented by digital photography, which would be included in the Decommissioning Plan. This information would be reviewed before decommissioning demolition documents are prepared and would be included in the submittal of an Existing Conditions Report to the County. Pre-construction documentation would also include descriptions of existing vegetative and soil conditions, as well as existing topography and drainage patterns.

### 2.7.2.2 Restoration Plan

Prior to site restoration, AES would evaluate the project site compared to the pre-construction information and provide a Site Restoration Plan. Restoration of the project site would begin following removal of all aboveground equipment. The restoration may consist of de-compaction of the topsoil by disking or tilling and revegetation of the property as necessary. Mass grading is not anticipated since the initial project would not alter topography substantially. The developer would provide dust control during site restoration. Landscaping and paved entrances would remain following site restoration. The future use of the land would be determined at the time of decommissioning. Deciding factors would be influenced by County land use and comprehensive plans, and regulations in the future. Implementation of the Restoration Plan would ensure that the project site would be restored to pre-construction conditions, therefore allowing future farming of the site if groundwater becomes available in the future.

### 2.7.2.3 Restoration Monitoring

After project decommissioning, the developer would coordinate with the County to monitor vegetation and drainage following restoration until permanent vegetation is established. Reseeding, soil stabilization, weed control, and fertilization would be provided by the developer as needed until the project site is stabilized and considered complete by the County. Restoration efforts and monitoring would be continued until the success criteria outlined in the Site Restoration Plan are met.

Upon completion of the project site restoration, a Final Restoration Monitoring Report would be submitted to the County documenting the restoration process and results.

## 2.8 Project Objectives

The proposed project would meet the increasing demand for electricity generated from clean, renewable technology. Recent legislation enacted in California recognizes the multiple benefits associated with the development of renewable energy resources. These benefits include diversification of energy portfolios, reductions in greenhouse gas (GHG) emissions, and the creation of "green" jobs within the State of California.

Additionally, the proposed project would assist California in the effort to meet the newly mandated Renewable Energy Portfolio Standards (RPS). Senate Bill (SB) 100, approved in 2018, establishes RPS targets for California that state that the goal of the program is to achieve 50 percent renewable resources by 2026, 60 percent by 2030, and 100 percent by 2045. The bill requires retail sellers and local publicly owned electric utilities to procure at least the minimum quantity of electricity products from eligible renewable energy resources. State government agencies have been directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines. The project qualifies as an eligible renewable energy resource as defined by the California PRC and would help the state meet the objective of increasing renewable energy generation. In addition, the project would contribute much needed competitive energy during peak power periods to the electrical grid in California.

By providing a new source of renewable energy, the proposed project would reduce air pollution and GHG emissions, which would assist the state in achieving GHG emissions reduction goals including those set forth in the Global Warming Solutions Act, or Assembly Bill (AB) 32. The offset effect of solar power results from the displacement of electrical power production that would otherwise occur at fossil-fueled power plants that necessarily generate GHGs alongside electricity. During its operational life, the proposed project would fully offset its GHG emissions and yield a net GHG benefit toward statewide GHG reduction goals. Specifically, the proposed project would result in a total net GHG reduction of approximately 116,749 tons of $CO_2e$ over the project life.

The project planning objective is to minimize impacts to the environment and the local community by:

- Using disturbed land or land that has been previously degraded from prior use
- Using existing electrical distribution facilities, ROWs, roads, and other existing infrastructure where possible to minimize the need for new electrical support facilities
- Minimizing impacts on threatened or endangered species or their habitats, wetlands and waters of the United States, cultural resources, and sensitive land uses
- Minimizing water use
- Reducing greenhouse gas emissions

## 2.9 Environmental Factors Potentially Affected

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

## 2.10 Determination

On the basis of this initial evaluation:

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

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

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

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

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

| | |
|---|---|
| Signature | Date |
| Printed Name | For |

Chapter 3
# California Environmental Quality Act Checklist

## 3.1 Aesthetics

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Except as provided in Public Resources Code Section 21099, would the project: | | | | | |
| a. | Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☒ | ☐ |
| b. | Be visible from or obstruct views from a regional riding, hiking, or multi-use trail? | ☐ | ☐ | ☒ | ☐ |
| c. | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ☒ |
| d. | 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? | ☐ | ☐ | ☒ | ☐ |
| e. | Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☒ | ☐ | ☐ |

### 3.1.1 Environmental Setting

The project site is located within the west/central portion of the Antelope Valley in a predominantly flat landscape. The Little Buttes area, just west of 90th Street West approximately 1 mile southwest of the Project site, provides some isolated topographic variation. Rural development and public infrastructure in the landscape surrounding the site include scattered rural residences, agricultural fields, high-voltage electric transmission lines, electrical distribution lines, and roadways. The San Gabriel Mountains foothills are visible in far-off views to the south from the site. The Tehachapi Mountains are visible in far-off views to the northwest. The Pacific Crest Trail crosses the Tehachapi Mountains at the base of the foothills; and is located approximately 9 miles northwest of the site at its closest point. Wind energy facilities, substations, PV solar facilities, and transmission lines are located between the site and the Pacific Crest Trail. The area within 5 miles of the Project site is largely rural. Irrigated agricultural fields are common to the northeast and northwest. Clusters of residential development are located approximately 1.5 miles southeast (known as Antelope Acres) and 1 mile east.

The project site is located within a sparsely developed, rural area of north Los Angeles County. On-site vegetation consists mostly of sparse, low-growing, desert scrub. Ruderal vegetation within the project site typically consists of broadleaf weeds, such as shortpod mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and white tumbleweed (*Amaranthus albus*), but may also include scattered non-native trees, such as pepper (*Schinus spp.*), eucalyptus (*Eucalyptus spp.*), and salt cedar (*Tamarix spp.*). The project site is surrounded by residential dwelling units to the southwest and north. All other area surrounding the project site consist of fallow agricultural land. There is existing electrical infrastructure in the area, including overhead telephone and/or cable circuits along 90th Street West, West Avenue A, and West Avenue A-8. The area surrounding the project site is a rural environment with few existing land uses that emit ambient light. There are no street or traffic lights in the vicinity of the project site.

The project site is located approximately 1-mile northeast of Little Buttes, an isolated hill surrounded by flat desert, which is considered a scenic area by the City of Lancaster (City of Lancaster 2009). Little Buttes has hiking trails, but they are largely unmarked social trails and no formal scenic overlook or parking areas have been established by signage. The project site may be visible from elevated locations along the Pacific Crest Trail, from certain locations in the California Poppy Reserve, and would be visible from portions of the Little Buttes area.

According to the California Scenic Highway Mapping System, there are no officially designated or eligible State scenic highways near the project site vicinity, and none of the roads surrounding the project site are identified as scenic highways under the County General Plan (General Plan) (Caltrans 2020, LACDRP 2015). However, 90th Street West is a Priority Scenic Drive, as designated by the Area Plan (County of LA 2015) and a potential scenic route by the City of Lancaster's Master Environmental Assessment (City of Lancaster 2009).

## 3.1.2 Project Impacts

***a. Would the project have a substantial adverse effect on a scenic vista?***

**Less Than Significant Impact.** There are no designated or eligible State scenic highways or vistas in the vicinity of the project site, however 90th Street West is a Priority Scenic Drive, as designated by the Area Plan (County of LA 2015) and a potential scenic route by the City of Lancaster's Master Environmental Assessment (City of Lancaster 2009). After construction, the proposed solar array would stand approximately 6 to 10 feet tall and would not degrade or obstruct views of the surrounding mountains and buttes from the scenic roads and vantage points surrounding the project site.

During construction, activities and equipment would be noticeable from vistas on top of and around Little Buttes. Any trash, debris, and waste would be removed from the Project site during construction and the site screened or partially screened by fencing. Adverse visual effects from construction would be temporary and last only during the construction time period. Construction activities may produce dust visible from Little Buttes and 90th Street West, however, development and implementation of the fugitive dust plan would likely be required and would reduce visible dust. Additionally, MM AQ-1 contains provisions for dust control (see Section 3.3, *Air Quality*).

The proposed project would be visible from Little Buttes; and may be visible from higher elevations in the California Poppy Reserve where views are not blocked by terrain. However, from that distance, the proposed project would not appear dissimilar to an agricultural field in shape and size after

construction. Therefore, there would be a less than significant impact to scenic resources and no mitigation is required.

***b. Would the project be visible from or obstruct views from a regional riding or hiking trail?***

**Less Than Significant Impact.** The Pacific Crest Trail, the most notable trail in the area, is approximately 9 miles northwest of the project site, and due to distance and intervening topography, views of the project site from the Pacific Crest Trail are very limited, if it is visible at all (Pacific Crest Trail Experience Association 2021). Wind energy facilities, substations, PV solar facilities, and transmission lines are located between the Pacific Crest Trail and the project site. For these reasons, implementation of the proposed project will not adversely affect the visual experience for recreationists on the Pacific Crest Trail.

The County Department of Parks and Recreation has proposed a segment of the Kern County Connector Trail to be built within the east side of the project site and west side of 90th Street West. This trail would be a twelve (12) foot wide multiuse trail that would allow for hiking, mountain biking, and equestrian uses. Currently, this trail segment is occupied by the existing road shoulder and an existing power line right-of-way. Due to the existing presence of the power line right of way, implementation of the proposed project would not adversely affect the visual experience for recreationists on the proposed Kern County Connector Trail.

A Decommissioning Plan will be prepared and submitted to the County for approval prior to the issuance of a CUP and grading permit. The Decommissioning Plan will include provisions to ensure the project site is returned to a pre-construction beneficial use upon termination of the project. Therefore, impacts on riding or hiking trails are less than significant and no mitigation is required.

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

**No Impact.** There are no designated or eligible State scenic highways or vistas in the vicinity of the project site, therefore there would be no impact to scenic resources.

***d. In non-urbanized areas, would the project 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?***

**Less Than Significant Impact.** The project site and surrounding areas are primarily dominated by fallow agricultural land. While the proposed project would not affect any designated scenic vistas, the project involves the installation of an approximately 148.8-acre solar array and related appurtenances on currently undeveloped land. Thus, changes in the visual characteristics of the project site would occur. The proposed PV panels would be placed on mounting structures and are anticipated to reach approximately 6 to 10 feet above the ground. If a tracking system is implemented, the top height of the panels would vary slightly throughout the day as the panels rotate to track the movement of the sun across the sky. The tallest components of the project would be higher than eye level and, therefore, the solar facility would obstruct views through the project site for viewers on adjacent roadways. The gen-tie line would be installed overhead and underground. The underground gen-tie line would not result in significant visual impacts. The overhead gen-tie line would be installed along the eastern side of 110th St West. As there are currently overhead power lines running along the

western site of 110th St West, the addition of the gen-tie line would not substantially degrade the existing visual character along this corridor and impacts would be less than significant.

Construction activities and equipment would be noticeable around the site during construction of the project. During construction, disturbance areas would appear as large patches of fine, buff-colored rock and soil. Construction activities may produce visible dust but impacts would be mitigated to less than significant with implementation of the fugitive dust plan. Adverse visual effects from construction would be temporary and last only during the construction time period.

The lands surrounding the project site are largely open space with areas to the north and southwest sparsely developed with residences. Given the rural nature of the project site, relatively few people are traveling on the roads adjacent to the project site at any given time. The project site is not located near any heavily visited land uses and would not be viewed regularly by the general public. The project and associated fencing would not degrade or obstruct views of the surrounding mountains and buttes from the vantage points surrounding the project site. Nevertheless, the visual change in character of the project site from open space to developed solar facilities would be considerable and significant.

Considering the mix of existing surrounding land uses (i.e., open space, rural development, and agriculture), implementation of the project would be generally compatible with the character of the existing surrounding land uses. The utility-related function and aesthetic of the project would not substantially degrade the character of the surrounding area. Pursuant to the County Code, solar energy facilities are a conditionally allowed use in the A-2 Zone, which shows that the County generally considers them to be a compatible use in the area when appropriately designed and conditioned. There is existing electrical infrastructure in the area, including overhead electrical circuits along 90th Street West, West Avenue A-8, and West Avenue A.

The applicant of the proposed project would submit a Landscaping Plan to the County for review. The proposed landscaping would provide a visual buffer between the public roadways and the project along the portions of the perimeter fence parallel to West Avenue A and 90th Street West, views into the project site would be obscured and naturalized through the use of the required landscaping along the perimeter fence. Implementation of the landscaping plan would reduce the visual impacts of the on-site solar array to less than significant.

The proposed solar arrays (up to a height of approximately 10 feet) and associated fencing are not anticipated to create a permanent visual obstruction for the background views of the mountains and buttes. Implementation of the proposed landscape at maturity would reduce impacts to public views of the project site from adjacent areas.

A Decommissioning Plan for the project would be prepared and submitted to the County for approval prior to the issuance of a grading permit. This Decommissioning Plan would ensure that the project site is returned to a beneficial use upon termination of the proposed solar energy generation uses if required. The project would continue to operate for approximately 35 years, which is the useful life of the PV panels. Therefore, any visual impacts created by the project would exist only for the life of the proposed project, and the project site would be restored per the County requirements thereafter.

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

**Less Than Significant Impact with Mitigation.** As previously noted, the project site is located in a rural environment with few existing land uses that emit ambient light. Due to the rural nature of the

surrounding area, any additional contribution of night lighting would be considered a significant impact. The proposed project may include lighting at project entrance gates for security and around the main switchgear for occasional nighttime service needs, but nighttime activities are not anticipated during operation of the project. In order to reduce potential impacts associated with the security lighting, applicant-proposed Mitigation Measure (MM) AES-1 (below) requires that any on-site lighting consist of modern, low-intensity, downward- shielded fixtures that are motion activated, and would be directed onto the project site. Since the lights would be motion activated, they would only be occasionally visible by nearby residences when activity in the area triggers the lights. Motion detectors would be set at a sensitivity level that could not be triggered by small animal movement. In addition, the CUP requires the applicant to submit a Landscape Plan to the County for review. This Landscape Plan shall incorporate (native or non-native) vegetative landscaping periodically spaced, that is suitable to withstand the typical weather and climate conditions near the project site. Irrigation via water trucks would be required until the landscaping is established. The proposed landscaping would provide a visual buffer between the public roadways and the project along the portions of the perimeter fence parallel to West Avenue A and 90th Street West. Implementation of the landscaping plan would reduce the visual impacts associated with daytime glare caused by on-site solar array. Implementation of MM AES-1 would reduce impacts from nighttime lighting to a less than significant level. The project's construction activities are planned to occur during daylight hours.

Although not anticipated, nighttime construction (if any) would be conducted in accordance with appropriate County safety, noise, and other requirements. This includes the Los Angeles County Noise Ordinance (Section 12.08), which prohibits construction (including demolition) noise disturbance across residential or commercial real-property lines Monday through Saturday, between the hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays. Increased truck traffic, and the transport of solar arrays and construction materials to the project site would temporarily increase glare conditions during construction. However, this increase in glare would be minimal and temporary. Construction activity would occur on focused areas of the project site as construction progresses and any sources of glare would not be stationary for a prolonged period of time. Additionally, the surface area utilized by construction equipment would be minimal compared to the scale of the project site. Therefore, construction of the proposed project would not create a new source of substantial glare that would affect daytime views in the area. Impacts would be less than significant during the construction period.

During operation, the primary potential for glare would be from the glass surfaces of the PV panels. The PV panels would not be expected to cause significant glare because PV panels are designed to absorb as much sunlight as possible and therefore would have minimal reflectivity. The proposed solar array would consist of flat-plate PV panels, which incorporate anti-reflective and/or diffusion coating technologies that reduce fugitive glare and increase the efficiency of the solar facility. Any glare impacts that would occur would be further reduced by intervening elements in the immediate viewshed, such as the chain-link fence around the perimeter of the project site and the vegetative screening incorporated into the project.

## 3.1.3 Mitigation Measures

**MM AES-1:** Any lighting that may be installed in specific locations within the project site, as required for nighttime security purposes, shall consist of modern, low-intensity, downward-shielded fixtures that are motion activated, and would be directed onto the project site. All lighting would comply with the requirements of the Los Angeles County Code Title 22, Chapter 22.80,

Rural Outdoor Lighting District. Motion detectors shall be set at a sensitivity level that cannot be triggered by small animal movement or vehicular traffic.

Implementation of this mitigation measure would reduce impacts to aesthetics to a less than significant level.

# 3.2 Agriculture and Forest Resources

| | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project: | | | | |
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☒ | ☐ | ☐ |
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☒ | ☐ |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d. Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

## 3.2.1 Environmental Setting

The proposed project is located in unincorporated Los Angeles County within the Antelope Valley, which is characterized by a high desert climate environment on the western edge of the Mojave Desert. Agricultural productivity in the Antelope Valley has been historically, and is currently, limited by water availability and climatic conditions.

The project site is located within the Antelope Valley Groundwater Basin, a groundwater basin that has become part of the largest water rights dispute in California history. The Antelope Valley Groundwater Adjudication involved 15 years of complex proceedings regarding competing water rights among more than 4,000 parties, including public water suppliers, landowners, small pumpers, non-pumping property owners, and federal and state agencies. The Judgment and Physical Solution

issued by the adjudication in 2015 identified that the basin was in a state of overdraft, established respective water rights among groundwater producers, and ordered a rampdown of groundwater production to allow the basin to replenish governments. The number of acres associated with irrigated agriculture in the Antelope Valley increased by about 15 percent from 2016 to 2017 but decreased by about 35 percent in 2018, commensurate with the mandatory reduction in pumping in compliance with the Judgment and Physical Solution for the Antelope Valley Groundwater Adjudication. As production is reduced during the "Rampdown Period," the irrigated agricultural acreage that is economically viable for farming may continue to decline (Antelope Valley Watermaster 2019). Many local absentee owners, active farmers, and speculators did not elect to be part of the Antelope Valley Groundwater Adjudication litigation for water usage; this litigation ultimately cost participating parties nearly two decades of attorney fees (sPower 2020). As a result, those who did not participate in the adjudication are subject to the annual water quantities and rates assigned by the Watermaster.

The project site is currently designated as an Agricultural Resource Area by the County of Los Angeles General Plan and the Antelope Valley Plan (LACDRP 2015, LACDRP 2015a). Agricultural Resource Areas consist of farmlands identified by the California Department of Conservation (CDC) and farms that have received permits from the Los Angeles County Agricultural Commissioner/Weights and Measures. The County encourages the preservation and sustainable utilization of agricultural land, agricultural activities and compatible uses within these areas. However, additional uses are allowable in Agricultural Resource Areas provided that they are balanced with the preservation of the rural character and conservation of ecological resources (LACDRP 2015).

The project site historically consisted of undeveloped land from as early as 1915 through 1919. In the late 1920s, agricultural land was first observed on the site and the site's agricultural land use has remained relatively unchanged through 2016 (Terracon, 2020). Scattered non-native trees, such as pepper, eucalyptus, and salt cedar are present on site. Remaining surrounding parcels consist of vacant land, formerly used for agriculture. Several private residences are located along West Avenue A to the north, and two private residences are also located adjacent to the southwestern corner of the project site. The CDC Farmland Mapping and Monitoring Program (FMMP) identifies the project site as Prime Farmland (CDC 2020). The project site was last mapped in 2016. Though the FMMP updates maps every two years, 2018 data is not yet available. In order for a property to end its designation as Prime Farmland, agricultural activity must cease for at least 4 years prior to re-mapping. No part of the project site is under a Williamson Act contract (CDC 2017). The vicinity of the project site is primarily undeveloped land and private residences; the nearest active agricultural use is approximately 0.25-mile northwest of the project site.

The California Department of Conservation defines Prime Farmland as:

> "Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date." (CDC 2020a)

The County of Los Angeles Code defines Agricultural Zones as:

> "The Agricultural Zones (Zones A-1 and A-2) are established to permit a comprehensive range of agricultural uses in areas particularly suited for agricultural activities. Permitted uses are intended to encourage agricultural activities and other such uses required for, or desired by, the inhabitants of the community. An area so zoned may provide the land necessary to permit low-

density single-family residential development, outdoor recreational uses, and public and institutional facilities."

The project site has historically produced hay and alfalfa crop yields and review of historical aerial photography shows that a well has been present on site since approximately the mid-1960s. However, the previous owner of the project site did not participate in the Antelope Valley Water Litigation, which has been ongoing for approximately 20 years. The result of failing to participate in this litigation is that the property is presently only entitled to 3 acre-feet per year of water. Exceeding this amount would result in being charged for each acre foot used in excess by the Antelope Valley Watermaster. Hay and alfalfa production requires approximately 700 acre-feet to 800 acre-feet of water per year. In order to breakeven on farming operations, the cost of water on the project site could not exceed $100 per acre foot. In 2018, the property used approximately 800 acre-feet of water and the Antelope Valley Watermaster levied a rate of $417 per acre foot, resulting in a bill of approximately $350,000. At this rate, farming operations for 2018 experienced an approximate loss of $270,000 (Brumfield 2019). Watermaster rates for 2019 are anticipated to be closer to $500 per acre-foot. This trend shows that under these circumstances, irrigation of the project site is no longer economically feasible. Additionally, any future successors or property owners would be charged the prevailing rate set by the Watermaster. Therefore, the property would never be economically used for any type of farming operation in the future (Brumfield 2019).

## 3.2.2 Project Impacts

***a. 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?***

**Less Than Significant Impact with Mitigation.** The project site is presently fallow agricultural field, however, the CDC FMMP identifies the project site as Prime Farmland. To be considered Prime Farmland, land must possess three components: soil quality, growing season, and a moisture supply needed to produce sustained high yields. Though the project site has historically demonstrated the ability to produce sustained high yields, implying suitable soil quality and a favorable growing season, the property currently lacks access to an adequate moisture supply as a result of the Antelope Valley Water Litigation (Brumfield 2019). As the property is only allowed 3 acre-feet per year of water, with any additional water needing to be purchased at rates around $400-500 per acre foot, agriculture is no longer economically viable on the project site. As previously discussed, a moisture supply needed to produce sustained high yields no longer effectively exists due to the results of the litigation, therefore the site does not appear to meet the FMMP definitions for either Prime Farmland or Farmland of Statewide Importance. Therefore, it is anticipated that during the next update of the DOC's FMMP mapping data, the project site would be downgraded to either grazing land or farmland of local importance. As the project site should no longer be classified as Prime Farmland as it lacks an adequate moisture supply, impacts resulting from the implementation of the proposed project would be less than significant. Additionally, the implementation of MM AGR-1 would restore the project site to pre-construction conditions following decommissioning. This would ensure that the property could be used for agriculture if water becomes readily available in the future. Impacts would be less than significant with mitigation.

***b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?***

**Less Than Significant Impact.** The project site is zoned A-2, as illustrated in the Land Use Map of the County General Plan 2035 (Los Angeles County Department of Regional Planning [LACDRP] 2020). In accordance with Section 22.16.030.C and Section 22.140.510 of the County Code, a solar facility is a permitted use within the A-2 (Heavy Agricultural) Zone, with approval of a CUP. Based on historical site photos, the site consisted of undeveloped land from as early as 1915 through 1919. In the late 1920s, agricultural land was first observed on the site and the site's agricultural land use has remained relatively unchanged through 2016.

The project site does not contain Williamson Act contracted lands. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract and would result in a less than significant impact.

***c. 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 Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?***

**No Impact.** The project site is not zoned for forest land or timberland resources and only contains a few scattered non-native trees. No impacts associated with forest land or timberland would occur with the implementation of the project.

***d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?***

**No Impact.** The project site is a fallow agricultural field and contains no forest land. The project would not result in the removal or conversion of forest land; therefore, no impacts would occur.

***e. 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?***

**No Impact.** The proposed project would not cause other changes in the environment that could indirectly result in the conversion of farmland to non-agricultural uses. The nearest active agricultural use is approximately 0.25-mile northwest of the project site. Adjacent and nearby properties are currently vacant land, formerly used for agriculture. Further, passive solar facilities such as the one proposed are generally considered to be compatible with adjacent agricultural uses. The implementation of the proposed project would not result in active farmland being converted to non-agricultural use. No impacts associated with this issue would occur with the implementation of the project.

## 3.2.3 Mitigation Measures

**MM AGR-1:** A farmland restoration component would be included in the project's Decommissioning Plan. As discussed in Section 2.7, pre-construction conditions would be documented by digital photography and used as references to adequately restore the project site to its previous condition. This information would be reviewed before decommissioning demolition documents are prepared and would be included in the submittal of an Existing Conditions Report to the County. Pre-construction documentation would also include descriptions of existing vegetative and soil

conditions, as well as existing topography and drainage patterns. In order to restore the site to pre-construction conditions, activities may consist of de-compaction of the topsoil by disking or tilling and fertilization. Restoration efforts and monitoring would be continued until the success criteria outlined in the Site Restoration Plan are met. Upon completion of the project site restoration, a Final Restoration Monitoring Report would be submitted to the County documenting the restoration process and results. Implementation of the Decommissioning Plan and Site Restoration Plan would restore the project site to conditions such that agriculture would be feasible if water becomes available in the future.

# 3.3 Air Quality

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

## 3.3.1 Environmental Setting

To protect the health and welfare of the populace, the Federal Clean Air Act (FCAA) requires that the U.S. Environmental Protection Agency (USEPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants. Similarly, the California Clean Air Act requires the California Air Resources Board (CARB) to set standards and designate areas as either attainment or nonattainment based on whether the California Ambient Air Quality Standards (CAAQS) have been achieved. As all criteria pollutants can have human health effects at certain concentrations, the NAAQS and CAAQS define the maximum amount of an air pollutant that can be present in ambient air without harming public health. Air quality standards have been established for the following six criteria pollutants: ozone ($O_3$), lead (Pb), carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), and particulate matter (PM), which consists of PM less than or equal to 10 microns in diameter ($PM_{10}$) and PM less than or equal to 2.5 microns in diameter ($PM_{2.5}$). The FCAA requires the USEPA to designate areas within the country as either attainment or nonattainment for each criteria pollutant based on whether the NAAQS have been achieved. Similarly, the CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Aside from establishing the NAAQS and specifying future dates for achieving compliance with the NAAQS, the FCAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met. California law does not require that CAAQS be met by specified dates as is the case with NAAQS. Rather, it requires incremental progress toward attainment.

The project site lies within the boundaries of the Antelope Valley Air Quality Management District (AVAQMD), an air district within the Mojave Desert Air Basin (MDAB). The U.S. Environmental Protection Agency (USEPA) has designated the AVAQMD as nonattainment for the March 2008 75 ppb 8-hour ozone National Ambient Air Quality Standard (NAAQS), and the AVAQMD has until July 2027

to achieve attainment pursuant to its attainment plan (AVAQMD 2017). The 2018 Area Designations for the CAAQS designate the MDAB as non-attainment for $O_3$ and $PM_{10}$ (California Air Resources Board [CARB] 2018).

## 3.3.2 Project Impacts

***a. Would the project conflict with or obstruct implementation of the applicable air quality plan?***

**Less than Significant Impact.** The AVAQMD is required, pursuant the NAAQS and CAAQS, to reduce emissions of criteria pollutants for which the District is in nonattainment (i.e., $O_3$ and $PM_{10}$). The most recent AVAQMD air quality attainment plan is the 2016 *Federal 75 ppb Ozone Attainment Plan* that was adopted in March 2017, which updates the previous *2008 AVAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Nonattainment Area).* In general, a project would not interfere with the applicable air quality plan if it is consistent with growth assumptions used to form the applicable air quality plan, and if the project implements all reasonably available and feasible air quality control measures from the applicable air quality plan or planning document referenced or used in the plan. A project would conflict with or obstruct implementation of the applicable air quality plan if the project is inconsistent with the underlying land use designation and zoning of the local applicable plan (e.g., General Plan). In this case, a conflict would occur if a project would introduce growth that is neither planned for nor mitigated by the applicable air quality plan. Air quality impacts are controlled locally through policies and provisions of AVAQMD, the Los Angeles County General Plan, the Antelope Valley Area Plan, and the Los Angeles County Code of Building Regulations. Per AVAQMD, a project would be deemed to not exceed this threshold if it is consistent with the existing land use plan. Further, according to AVAQMD, even if a project is inconsistent with the existing land use plan, if it does not increase dwelling unit density, or vehicle trips and vehicle miles travel, it would be considered to not conflict or obstruct implementation of the applicable air quality plan (AVAQMD 2016).

The Los Angeles County General Plan and Antelope Valley Area Plan are the governing land use documents for physical development at the project site. According to the County Zoning Ordinance, the project site is zoned A-2, Heavy Agricultural. As described in Section 1.2, *Project Description* the proposed project is a 21 MW ground-mounted utility-scale solar energy facility occupying 145 acres. Pursuant to the County Code, a ground-mounted utility-scale solar energy facility ("solar facility"), is a use in the A-2 Zone requiring a conditional use permit (CUP).[1] As discussed in the Project Description, the project applicant will obtain a CUP prior to implementation of the proposed project.

Implementation of the proposed project would require short-term construction that would result in worker, vendor, and haul trips to the project site. Construction is expected to last approximately 11 months, and the number of trips would vary throughout the construction period. These vehicle trips would cease with the completion of construction. Once the project is operational, vehicle trips would occur for the approximately two solar panel cleaning events per year, which would result in a maximum of 10 trips annually. Construction and operations activities are therefore not expected to result in a significant increase in vehicle trips or vehicle miles traveled. Additionally, as a solar facility the proposed project would not result in an increase in population. The proposed project would also

[1] Los Angeles County. Title 22 Planning and Zoning Division 1. Chapter 22.16 Agricultural, Open Space, Resort and Recreation, and Watershed Zones, Available at: https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT22PLZO_DIV1PLZO_CH22.24AGZO_PT3HEAGZO. Accessed on December 28, 2020.

comply with AVAQMD rules and air quality control measures including Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter Concentration), and Rule 1300 (New Source Review).

After certification of the CUP, the proposed project would be an allowed use on the project site. Additionally, the project would not result in an increase in population or a permanent substantial increase in vehicle trips or vehicle miles traveled in the project area. Therefore, the proposed project is considered to be consistent with the growth assumptions used to form the 2016 *Federal 75 ppb Ozone Attainment Plan*. As such, the project would not conflict with or obstruct the implementation of the applicable air quality plan. Impacts would be less than significant and no mitigation is required.

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

**Less than Significant Impact.** As discussed above, the AVAQMD is currently in nonattainment for $O_3$ under NAAQS, and for $O_3$ and $PM_{10}$ under the CAAQS. Construction and operation of the project will result in net increases of $O_3$ precursors (ROG and NOx), and $PM_{10}$ that could exceed thresholds established to attain the state and federal standards. In addition, construction and operation of the project would also generate emissions of CO, SOx, and $PM_{2.5}$. The construction- and operations-related air quality impacts are discussed below.

## Short-Term Construction Emissions

Construction of the proposed project would generate criteria pollutant emissions that could result in air quality impacts. Emissions would originate from off-road equipment exhaust, employee and haul truck vehicles, fugitive dust from site grading and earth movement, as well as re-entrained road dust from vehicle travel. Construction-related emissions would vary substantially depending on the level of activity, the specific construction operations, and wind and precipitation conditions. All emissions would be temporary and would cease once construction is complete. The proposed project is required to comply with AVAQMD rules and regulations, including Rules 402, 403, 404, and 1300, as described in Item 3.3.a above. Compliance with Rule 403, Fugitive Dust, would require implementation of a Dust Control Plan during construction.

The proposed project's construction emissions were estimated using a combination of emission factors and methodologies from the California Emissions Estimator Model (CalEEMod), version 2016.3.2 (Trinity Consultants 2017); CARB's EMFAC2017 model (CARB 2017); and USEPA's AP-42 *Compilation of Air Pollutant Emission Factors* (USEPA 2006); and project-specific construction data (e.g., schedule, equipment, truck volumes) provided by the project applicant. Construction would occur in two phases: Site Preparation and Grading, and PV/BESS/Gen-Tie Installation. Construction was assumed to occur five days per week and last approximately 11 months, beginning in October 2021. See Appendix A for a complete list of construction assumptions, including equipment, and vehicles.

Project-related construction emissions are summarized by phase in Table 3.3-1. Given that the construction period would be less than one year (approximately 11 months), emissions are assessed using AVAQMD's daily significance thresholds. As shown in Table 3.3-1, the maximum daily emissions during proposed project construction would not exceed the AVAQMD's significance thresholds, including those for pollutants for which the district is in nonattainment ($O_3$ precursors and $PM_{10}$). Accordingly, impacts related to emissions of criteria pollutants during construction of the proposed project would be less than significant and mitigation would not be required.

**Table 3.3-1. Daily Construction Criteria Pollutant Emissions in AVAQMD (lbs per day)**

| Construction Phase | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| Site Preparation and Grading | 9.17 | 100.45 | 67.86 | 0.16 | 29.03 | 9.99 |
| PV/BESS/Gen-Tie Installation | 8.98 | 95.71 | 66.92 | 0.15 | 26.75 | 9.64 |
| Max Daily Emissions | 9.17 | 100.45 | 67.86 | 0.16 | 29.03 | 9.99 |
| AVAQMD Thresholds | 137 | 137 | 548 | 137 | 82 | 65 |
| Exceeds Threshold? | No | No | No | No | No | No |

Source: Modeling output provided in Appendix A.
ROG = reactive organic gases NOx = nitrogen oxides
CO = carbon monoxide SOx = sulfur oxides
$PM_{10}$ = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter

## Long-Term Operational Emissions

Once operational, emissions associated with the proposed project would be related to periodic panel washing which would require water truck trips and use of pressure washers. Table 3.3-2 summarizes total annual project-related operational criteria pollutant emissions. Because the project's operational phase would exceed one year, the annual thresholds from AVAQMD are used to assess the project's operational emissions, in accordance with AVAQMD's guidance. As shown in Table 3.3-2, operations of the proposed project would not generate annual emissions in excess of the AVAQMD's significance thresholds, including those for pollutants for which the district is in nonattainment ($O_3$ precursors and $PM_{10}$). Accordingly, impacts related to emissions of criteria pollutants during operation of the proposed project would be less than significant and mitigation would not be required.

**Table 3.3-2. Annual Operational Criteria Pollutant Emissions (tons per year)**

| | Annual Criteria Pollutant Emissions (tons per year) | | | | | |
|---|---|---|---|---|---|---|
| Operations | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| Panel Washing (2 events) | <0.01 | 0.02 | <0.01 | <0.01 | 0.08 | <0.01 |
| AVAQMD Thresholds | 25 | 25 | 100 | 25 | 15 | 12 |
| Exceeds Threshold? | No | No | No | No | No | No |

Source: Modeling output provided in Appendix A.
ROG = reactive organic gases NOx = nitrogen oxides
CO = carbon monoxide SOx = sulfur oxides
$PM_{10}$ = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter

### *c. Would the project expose sensitive receptors to substantial pollutant concentrations?*

**Less than Significant Impact with Mitigation.** Sensitive receptors are facilities and structures where people live or spend considerable amounts of time, and include retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities. Land uses surrounding the project site consist of mainly open space areas, light agricultural land, low-density single-family housing, and undeveloped grazing lands. A single-family residence with agricultural structures is located directly adjacent to the southwest portion of the project site, and approximately three residences and an equestrian facility are located to the north of the project site, across West Avenue A. Single-family residences are also located approximately 0.1-mile, 0.4-mile, and 0.5-mile from the project site, southwest of the intersection of West Avenue a-8 and 95th Street West. Additional single-family

residential properties are located 0.2-mile west from the northwest corner of the site, 0.4-mile west from northwest corner of the site, 0.5-mile west from the western site boundary, 0.5-mile east of the eastern site boundary, and several properties are located to the northeast along 90th street west, ranging from approximately 0.1- to 0.3-mile from the northeast corner of the project site. Aside from those mentioned above, there are no additional residences, schools, nursing homes, or other sensitive receptors within approximately 0.5 mile of the project site. There are scattered residential uses along potential truck hauling routes along 90th Street West, 60th Street West, West Avenue A, and SR 138.

## Diesel Particulate Matter

Diesel particulate matter (DPM), which is classified as a carcinogenic toxic air contaminant by CARB, is the primary pollutant of concern with regard to health risks to sensitive receptors. The operation of diesel-powered construction equipment and heavy-duty trucks could potentially expose nearby sensitive receptors to DPM concentrations. As such, a health risk assessment (HRA) was conducted to evaluate the potential human health impacts that may result from exposure of nearby sensitive receptors the project's construction-related DPM emissions.

The HRA was performed using USEPA's American Meteorological Society/Environmental Protection Agency Regulator Model (AERMOD), carcinogenic and chronic risk assessment values presented by the Office of Environmental Health Hazard Assessment (OEHHA), as well as modeling guidance from the South Coast Air Quality Management District.[2]. The HRA takes into account OEHHA's most recent *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* guidance and calculation methods, which was adopted by OEHHA in March 2015 (OEHHA 2015). Detailed modeling assumptions and files can be found in Appendix A.

Table 3.3-3 shows the cancer risk and non-cancer hazard index at the maximum impacted residence. As shown in Table 3.3-3, implementation of the proposed project would not result in increased cancer risk or hazard index in excess of thresholds.

**Table 3.3-3. Estimated Health Risk during Construction**

| Location | Cancer Risk (cases per million) | Chronic Hazard Index |
|---|---|---|
| Maximum Incremental Risk at Existing Receptors | 3.6 | 0.01 |
| Thresholds | 10 | 1.0 |

Source: ICF Emissions Modeling (Appendix A)

Once operational, the project would have minimal emissions related to panel cleaning events. There would be up to two events per year and emissions would be generated from workers and water trucks traveling to and from the site, as well as the use of diesel-powered pressures washers. These emissions would occur only twice per year. Therefore, operation of the project would not expose sensitive receptors to substantial concentrations of DPM and impacts would be less than significant.

## Localized Particulate Matter Concentrations

The project site is located adjacent to the Los Angeles and Kern County boundary. Some of the potentially exposed receptors are located in Kern County. The Kern County Planning Department

[2] Modeling guidance from the South Coast Air Quality Management District was used in the absence of guidance from AVAQMD.

requires projects to estimate the maximum 24-hour average concentration of $PM_{10}$ and $PM_{2.5}$ at the project boundary and to compare concentrations to the appropriate NAAQS, CAAQS, Kern County CEQA thresholds, and/or the applicable threshold from the Eastern Kern Air Pollution Control District (EKAPCD) or San Joaquin Valley Air Pollution Control District (SJVAPCD). Although the project site is located within Los Angeles County, the analysis of the maximum 24-hour average concentration of $PM_{10}$ and $PM_{2.5}$ along the project site boundary was conducted in accordance with Kern County Planning Department requirements in recognition of the nearby sensitive receptors located directly north of the project site, across West Avenue A, in Kern County. The Kern County Planning Department has not adopted a threshold for areas that exceed the CAAQS or NAAQS. The SJVAPCD recommends USEPA Significant Impact Level (SIL) values for areas that exceed the NAAQS or CAAQS (SJVAPCD 2019). The SIL values are amounts USEPA considers to be a significant contribution in an area that exceeds air quality standards without the project. USEPA SIL values used in the analysis are as follows:

- An incremental increase in 24-hour $PM_{10}$ of 5 micrograms per cubic meter ($\mu g/m^3$), or
- An incremental increase in 24-hour $PM_{2.5}$ of 1.2 $\mu g/m^3$.

Project construction activities would generate exhaust and fugitive dust particulate matter emissions. $PM_{10}$ and $PM_{2.5}$ exhaust emissions would be generated by offroad equipment, onsite truck travel, and onroad vehicle travel including workers, vendors, and haul trucks traveling to and from the project site. $PM_{10}$ and $PM_{2.5}$ fugitive dust emissions would result from onsite soil disturbance activities such as grading, bulldozing, and onsite truck travel, and onroad vehicle travel generating brake wear, tire wear, and road dust emissions from worker, vendor, and haul trucks. Emissions of PM could result in increased concentrations that could have an adverse impact on localized air quality. Similar to the HRA, dispersion modeling using AERMOD was conducted to estimate the maximum 24-hour concentrations of $PM_{10}$ and $PM_{2.5}$ emissions during construction. The localized analysis evaluated the maximum concentrations located at the project fenceline and residential receptor.

As shown in Table 3.3-4, the proposed construction activity at and near the project site would not cause an exceedance of the appropriate $PM_{10}$ and $PM_{2.5}$ SILs at any receptor along the project boundary or offsite residential receptors. Therefore, impacts would be less than significant.

**Table 3.3-4. Estimated Particulate Matter Concentrations during Construction**

| Location | 24-hour $PM_{10}$ | 24-hour $PM_{2.5}$ |
|---|---|---|
| Maximum at Existing Receptors | 0.80 µg/m3 | 0.60 µg/m3 |
| Maximum at Project Fenceline | 1.44 µg/m3 | 1.04 µg/m3 |
| USEPA SIL | 5 µg/m3 | 1.2 µg/m3 |

Source: ICF Emissions Modeling (Appendix A).

## Valley Fever

Valley Fever, which is a disease affecting the lungs that is caused by spores of the *Coccidioides immitis* fungus, occurs in the Antelope Valley (Los Angeles County Department of Public Health [LACDPH] 2018). Although not a direct air pollutant, Valley Fever (coccidioidomycosis) fungal spore infections develop through inhalation of airborne fungal spores contained in windblown dust, and it is recognized to be endemic in areas with dry, alkaline soil conditions. Grading or other soil-disturbing activities have been known to release the spores into the air, thereby increasing the risk that nearby people could inhale the spores.

Construction activities would result in ground disturbance that could potentially expose onsite construction workers and nearby receptors to airborne spores. Therefore, the risk of exposure and contraction of Valley Fever as a result of the proposed project would be increased from the existing conditions, and **MM AQ-1** is required to ensure that construction workers take the proper precautions to avoid Valley Fever exposure. Implementation of the control measures in **MM AQ-1** during construction would reduce the impact related to Valley Fever and impacts would be less than significant with mitigation.

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

**Less than Significant Impact.** The proposed project involves the construction and operation of a solar facility within the County of Los Angeles. Project-related odor emissions would be minimal and would not affect a substantial number of people. During construction activities, emissions from construction equipment may be evident in the immediate area on a temporary basis. Material deliveries and hauling heavy-duty truck trips could occasionally produce odors from diesel exhaust. These odors would not affect a substantial number of people because construction would be temporary, and construction-generated emissions dissipate rapidly with increasing distance from the source. Standard operation of the solar facility would not produce objectionable odors, and there would be no permanent impacts. Impacts related to the creation of other emissions (such as odors) affecting a substantial number of people would be less than significant.

The proposed project is not anticipated to undertake activities that generate odors. Diesel exhaust fumes would be generated by equipment during construction activities, but any such odors would occur for short periods and would dissipate within a short distance from the project site. The odors are not anticipated to be objectionable because of the relatively small magnitude and short duration, as well as the low number of residents adjacent to the project site. Operation of the proposed project is not anticipated to cause any objectionable odors.

## 3.3.3 Mitigation Measures

**MM AQ-1: Minimize Exposure to Potential Valley Fever–Containing Dust.** To minimize personnel and public exposure to potential Valley Fever–containing dust on and off site, the following control measures shall be implemented during project construction:

- Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved off site to other work locations.
- Wherever possible, grading and trenching work shall be phased so that earth-moving equipment is working well ahead or downwind of workers on the ground.
- Water all active construction areas at least three times daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. The area immediately behind grading or trenching equipment shall be sprayed with water before ground workers move into the area.
- In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust shall leave the area until a truck can resume water spraying.

- Pave, apply water three times daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, all paved access roads, parking areas, and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water three times daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- All heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEP-filtered air system.
- AES shall implement a Valley Fever Management Plan approved by the County Department of Public Health.
- Workers shall receive training to recognize the symptoms of Valley Fever, and shall be instructed to promptly report suspected symptoms of work-related Valley Fever to a supervisor.
- A Valley Fever informational handout shall be provided to all onsite construction personnel. The handout shall, at a minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment.
- Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health–approved respirators shall be provided to onsite personal, upon request.

# 3.4 Biological Resources

| | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☒ |
| c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ |
| d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| e. Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or other unique native woodlands (juniper, Joshua, southern California black walnut, etc.)? | ☐ | ☐ | ☐ | ☒ |
| f. Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.174), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Ch. 102), Specific Plans (L.A. County Code, Title 22, Ch. 22.46), Community Standards Districts (L.A. County Code, Title 22, Ch. 22.300 et seq.), and/or Coastal Resource Areas (L.A. County General Plan, Figure 9.3)? | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| g. | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

## 3.4.1 Environmental Setting

A Biological Resources Technical Report (ICF 2021) was prepared for the proposed project, a copy of which is provided in Appendix B. Prior to conducting field surveys, ICF conducted a literature and records search for information on special-status species occurrences within the study area. The literature and records search included resources from the California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS), U.S. Fish and Wildlife Service (USFWS), United States Geological Survey (USGS), U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS), the Cornell Lab of Ornithology, and biological resource reports and environmental impact reports for nearby renewable energy projects in Los Angeles County. A Jurisdictional Delineation was prepared as part of the Biological Resources Technical Report to characterize aquatic resources potentially under the jurisdiction of the California Department of Fish and Wildlife, the Regional Water Quality Control Board (Lahontan region), and/or the U.S. Army Corps of Engineers (Appendix B). Most special-status wildlife species identified in the literature review are not expected to occur because of a lack of suitable habitat or absence during protocol surveys. Based on the results from the literature review, habitat assessments were conducted within the study area for the following special-status species: burrowing owl (*Athene cunicularia*), desert tortoise (*Gopherus agassizii*), American badger (*Taxidea taxus*), desert kit fox (*Vulpes macrotis arsipus*), Swainson's hawk (*Buteo swainsonii*), and special-status plants. Focused nest surveys were subsequently performed for raptors and common raven (*Corvus corax*).

The project is located within the Mojave Desert, a region that occurs between the southern, low-elevation, hot Sonoran Desert and the northern, high-elevation, relatively cool Great Basin. The Mojave Desert covers more than 40,000 square miles in California, Arizona, Nevada, and Utah and is characterized by hot summer temperatures and low annual precipitation of less than 5 inches. Daily temperature swings of 40°F can occur, with lows in the winter below or near freezing temperatures. Precipitation extremes are also common, with variations of 80 percent in annual precipitation. Summer thunderstorms can drop more precipitation on a site in one event than the mean yearly precipitation for that location. This area is geographically defined by the intersection of the San Andreas and Garlock faults and situated east of where the Tehachapi Mountains meet the Transverse Range. Soils in the study area are all generally loamy sand, slightly to moderately alkaline, coarse, and well drained. No aquatic resources were observed within the study area.

Three vegetation communities/land cover types were mapped within the Estrella Solar Facility study area (the proposed solar field and a 500-foot buffer around the site). The 148.8-acre solar facility site was mapped as pastures and crop agriculture, which includes fallow and temporarily idle land. Annual grasses and forbs, pastures and crop agriculture, and urban or developed vegetation communities were mapped in the 500-foot buffer surrounding the solar facility site. Primary species within the annual grasses and forbs vegetation type include fiddleneck (*Amsinckia* spp.), California poppy (*Eschscholzia californica*), goldfields (*Lasthenia* spp.), daisy (*Monolopia* spp.), tidy tips (*Layia* spp.), tickseed (*Coreopsis* spp.), foothill plantain (*Plantago erecta*), and small fescue (*Vulpia microstachys*). Urban/developed areas consisted primarily of paved roads and residential lots.

Five vegetation communities/land cover types were mapped within the gen-tie route study area. These vegetation communities or land cover types were annual grasses and forbs, pastures and crop agriculture, urban or developed land, alkaline mixed scrub, and rabbitbrush. The alkaline mixed scrub community is composed of saltbush, iodinebush (*Allenrolfea occidentalis*), horse brush (*Tetramydia* spp.), Kochia, bud sagebrush (*Artemisia spinescens*), and spiny hopsage (*Grayia spinosa*), and generally lacks cactus species. Mojave rabbitbrush (*Ericameria paniculata*) is the dominant or codominant vegetation in the shrub canopy within the rabbitbrush vegetation community.

## 3.4.2 Project Impacts

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

**Less Than Significant Impact with Mitigation.** As detailed in the Biological Technical Report, 21 special-status species are known from the regional vicinity and were evaluated for potential to occur within the study area. Special-status wildlife species that were observed, determined to have a high potential to occur within the study area, or were the subject of focused surveys are discussed in the subsections below. Based on the lack of suitable habitat, no special-status plant species have potential to occur within the study area.

### Swainson's Hawk

Swainson's hawk is a State Threatened (ST) species known to nest within Antelope Valley. A single adult Swainson's hawk was observed foraging within the project site. This individual had a metal leg band. Gophers (*Thomomys bottae*) were also observed on the project site, which are a primary food source of breeding Swainson's hawk. An active Swainson's hawk nest was observed in a tree approximately 0.4-mile northeast of the project site. Based on the location of this nest relative to the project site, observed foraging behavior, and the presence of primary prey (gophers) onsite, it is assumed the project site is providing the nest with ample foraging opportunity. Suitable foraging habitat for Swainson's hawk is present throughout the gen-tie route study area, and nesting habitat is available primarily along the proposed interconnection and gen-tie line, in roadside trees. Utility poles placed along the gen-tie route would provide perching opportunities for Swainson's hawk, golden eagle, and other special-status raptor species. These high structures (aboveground gen-tie) provide great advantage to avian predators, who can roost and survey wide areas, rather than having to fly for surveillance. Therefore, the gen-tie line could improve the opportunities for foraging for Swainson's hawk and other special-status raptor species. Potentially significant direct permanent impacts would result from the permanent loss of approximately 149 acres of Swainson's hawk foraging habitat within the project site. Additionally, temporary indirect impacts on foraging individuals could occur as a result of construction-related noise and dust. These disturbances may dissuade birds from foraging in the immediate vicinity of the project site. Disturbances, habitat conversions or other project-related activities could cause nest abandonment or forced fledging during the breeding season, which would be a substantial adverse effect on a CDFW-listed sensitive species. The implementation of MM BIO-1, below, would reduce the level of direct permanent and temporary indirect impacts on Swainson's hawk to below a level of significance.

### Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) was listed in May 2020 as a threatened species under the California Endangered Species Act (CESA). A flock of 80 tricolored blackbirds was incidentally observed flying over the study area in April 2020. This species could utilize the study area for foraging. No suitable nesting habitat is present within the study area. The removal of suitable foraging habitat for tricolored blackbird would be a direct, permanent effect and cumulative effect on breeding populations within the Antelope Valley. The implementation of MM BIO-1 would provide mitigation for loss of foraging habitat to ensure for the preservation of foraging habitat in perpetuity. This would reduce the level of direct permanent and cumulative effects on tricolored blackbird to below a level of significance.

### Golden Eagle

The golden eagle (*Aquila chrysaetos*) is a California Fully Protected species; it is also protected under the Bald and Golden Eagle Protection Act (BGEPA). Locally, golden eagle is a fairly common resident of the Tehachapi Mountains and the Antelope Valley. There is ample foraging habitat for golden eagle in the Antelope Valley. Within the study area, there is low potential for foraging because of an observed lack of moderate-sized prey species (ground squirrels and lagomorphs). Golden eagles could perch on the utility poles along 90th Street West and could occasionally fly over or land on the site. However, because of a lack of suitable prey species, golden eagle is not expected to functionally utilize the solar site for foraging. Utility poles placed along the gen-tie route would provide perching opportunities for Swainson's hawk, golden eagle, and other special-status raptor species. These high structures (aboveground gen-tie) provide great advantage to avian predators, who can roost and survey wide areas, rather than having to fly for surveillance. Therefore, the gen-tie line could improve the opportunities for foraging for golden eagles and other special-status raptor species. Golden eagles utilize cliff faces or large trees to construct large nests. No suitable nesting substrates or structures are present within the study area. Impacts on golden eagle, and on other nesting birds protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC), may occur as a result of proposed project construction. Impacts may include permanent loss of habitat used for foraging, nesting, and wintering by avian species and decreased suitability of habitat in the study area, resulting from various factors, such as increased noise from construction activities and vehicles, vehicle emissions, dust, and other human activity. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### Burrowing Owl

Burrowing owl is listed by CDFW as a Species of Special Concern (SSC). Burrow surveys were conducted throughout the solar project area in April 2020 and no burrows suitable to support this species were observed within the solar project area. Because of the lack of suitable nesting habitat, this species was determined to be absent as a nesting species in spring 2020. This species could nest outside of the solar project area and utilize the study area for foraging. If larger fossorial mammals, including California ground squirrel (*Otospermophilus beecheyi*), American badger, or desert kit fox, moved into the study area prior to construction, their burrows could be suitable nesting habitat for burrowing owl. Burrows large enough to support burrowing owl are rare along the gen-tie route. There is potential for burrows to be constructed along the gen-tie route before construction. Along 110th street, the gen-tie would consist of overhead utility line paralleling an existing corridor of utility

line along 110th Street. The existing overhead utility line along 110th Street provide perches for predators, including sensitive raptor species, which would result in a low potential to burrowing owls to utilize any new or existing burrows along the gen-tie route. Therefore, there is potential for burrowing owl to move into the site or occupy adjacent to the gen-tie route before construction occurs. The implementation of MM BIO-1 through MM BIO-5 would reduce the likelihood of direct or indirect impacts on burrowing owl in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is listed by CDFW as an SSC. Loggerhead shrike was not observed during 2020 surveys, but has a high potential to forage within the study area , including the solar project site or gen-tie alignments. Although there are few suitable trees or bushes within the solar project site or adjacent to the gen-tie route, this species has potential to nest within the study area and may forage from existing utility line along the 110th Street gen-tie route. Impacts on loggerhead shrike, and on other nesting birds protected by the MBTA and the CFGC, may occur as a result of proposed project construction. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### Northern Harrier

Northern harrier (*Circus hudsonius*) is listed by CDFW as an SSC. Northern harrier was not observed during 2020 surveys, but is known from the vicinity and has a high potential to forage within the study area, including the solar project site or gen-tie alignments. The species nests on the ground and could nest within the solar project area prior to vegetation clearing. This species would not be expected to nest in or immediately adjacent to existing roads along the gen-tie line. Impacts on northern harrier, and on other nesting birds protected by the MBTA and the CFGC, may occur as a result of proposed project construction. Impacts may include permanent loss of habitat used for foraging, nesting, and wintering by avian species and decreased suitability of habitat in the study area, resulting from various factors, such as increased noise from construction activities and vehicles, vehicle emissions, dust, and other human activity. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### Peregrine Falcon

Peregrine falcon (*Falco peregrinus anatum*) is a California fully protected species. A peregrine falcon was observed flying over the site in 2020. This species could utilize the study area, including the solar project site or gen-tie alignments, for foraging. No suitable nesting substrates or structures are present within the study area. Impacts on peregrine falcon, and on other nesting birds protected by the MBTA and the CFGC, may occur as a result of proposed project construction. Impacts may include permanent loss of habitat used for foraging and decreased suitability of habitat in the study area, resulting from various factors, such as increased noise from construction activities and vehicles, vehicle emissions, dust, and other human activity. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### Yellow-headed Blackbird

The yellow-headed blackbird (*Xanthocephalus xanthocephalus*) is a CDFW SSC. Yellow-headed blackbirds were incidentally observed foraging in agricultural fields within the study area in April 2020. No nesting habitat is present within the study area, including the solar project site or gen-tie alignments. Impacts on yellow-headed blackbird, and on other nesting birds protected by the MBTA and the CFGC, may occur as a result of proposed project construction. Impacts may include permanent loss of habitat used for foraging, nesting, and wintering by avian species and decreased suitability of habitat in the study area, resulting from various factors, such as increased noise from construction activities and vehicles, vehicle emissions, dust, and other human activity. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### Yellow Warbler

The yellow warbler (*Setophaga petechia*) is listed as a CDFW SSC. A yellow warbler was observed flying over the site in 2020. No suitable riparian nesting habitat is present within the study area, and this species is not expected to forage in the study area. Impacts on yellow warbler, and on other nesting birds protected by the MBTA and the CFGC, may occur as a result of proposed project construction. Impacts may include permanent loss of habitat used for foraging, nesting, and wintering by avian species and decreased suitability of habitat in the study area, resulting from various factors, such as increased noise from construction activities and vehicles, vehicle emissions, dust, and other human activity. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

### American Badger

American badger is an uncommon CDFW SSC that ranges throughout the entire state, but is rarely encountered. Burrow surveys were conducted throughout the study area in April 2020 and no burrows of this species were found. Consequently, American badger is not expected to currently utilize study area. However, this species has been detected in the area (CNDDB 2020), has potential to utilize fallow agricultural areas and grasslands, including the project site, and could move into the study area prior to or during construction. Measures MM BIO-3 through MM BIO-5, MM BIO-7, and MM BIO-8 would reduce the likelihood of direct mortality of any American badger occurring within the project footprint during construction.

### Desert Kit Fox

The desert kit fox is managed as fur-bearing mammal under Title 14 of the California Code of Regulations §460, which states that kit foxes may not be taken at any time. Burrow surveys were conducted throughout the study area in April 2020 and burrows of this species were not found. Consequently, desert kit fox is not expected to currently utilize study area. However, this species is known from the region and has some potential to utilize fallow agricultural areas and grasslands, including the project site, and could move into the study area prior to or during construction. Measures MM BIO-3 through MM BIO-5, MM BIO-7, and MM BIO-8 would reduce the likelihood of direct mortality of any desert kit fox occurring within the project footprint during construction.

### Raptor and Common Raven Nests

Eight stick nests, besides the Swainson's hawk nest, were identified within the study area during focused raptor nest surveys in April and May 2020. Four of the stick nests were occupied by common ravens, and four did not have signs of activity. The single Chinese elm in the center of the project site had a stick nest occupied by a common raven in 2020. Additionally, two family groups of great horned owls with recent fledglings were observed within the half-mile study area. Nesting substrates for common raven, as well as tree-nesting raptors (potentially including red-tailed hawk, great horned owl, and barn owl), detected within the study area include utility poles and mature ornamental trees (e.g., pine, cypress) surrounding developed areas. These nests are not considered a sensitive resource, but are monitored as they are potential nesting habitat for certain sensitive raptor species. Impacts on raptor and common raven and on other nesting birds protected by the MBTA and the CFGC, may occur as a result of proposed project construction. Impacts may include permanent loss of habitat used for foraging, nesting, and wintering by avian species and decreased suitability of habitat in the study area, resulting from various factors, such as increased noise from construction activities and vehicles, vehicle emissions, dust, and other human activity. Implementation of MM BIO-3 through MM BIO-7 would reduce the likelihood of direct or indirect impacts on special-status and nesting birds in the study area during construction, and would reduce the potential for adverse effects to below a level of significance.

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

**No Impact.** The USFWS has not designated any critical habitat within the study area. No sensitive vegetation communities would be affected by the project. No aquatic resources were observed within the study area. No drainages, channels, or wetlands were observed within the study area. No aquatic resources regulated under Sections 404 or 401 of the Clean Water Act (CWA), Section 13260 of Porter-Cologne, or Section 1602 of the California Fish and Game Code were identified.

***c. 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?***

**No Impact.** As indicated in in the Biological Technical Report (Appendix B), the project site does not contain any federally or State-protected wetlands or waters of the United States; therefore, no impact is anticipated.

***d. 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?***

**Less Than Significant Impact.** The habitat within the study area consists of fallow agriculture and non-native grasslands dominated by small annual grasses and herbaceous vegetation. The study area also includes several rural residential properties, dirt and paved county roads, and a few scattered ornamental trees. These features do not pose a physical barrier to the movements of most wildlife species. As a result, wildlife can currently move through most of the proposed project area unimpeded, as is the case for the Antelope Valley generally. There are no washes or riparian areas to support concentrations of wildlife movement. All habitats within the study area are similar to those present in the surrounding areas. No known or identified wildlife corridors exist within the proposed

project, nor has any part of the proposed project been identified as a wildlife connectivity area as mapped by the *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer et al. 2010). Project implementation will include the installation of chain-link fencing around the perimeter of the project site with 50'-wide, 12-inch high, wildlife pass-through openings every 500' on-center. The proposed project would not affect regional wildlife movement or interfere substantially with the movement of any native resident in areas surrounding the project site, nor would it impede the use of native wildlife nursery sites. Impacts would be less than significant, and no mitigation is required.

***e. Would the project convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or other unique native woodlands (juniper, Joshua, southern California black walnut, etc.)?***

**No Impact.** The study area did not have any oak trees, Joshua trees, or other unique native tree species; therefore, the project would not convert any oak woodlands or other unique native woodlands.

***f. Would the project conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.174), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, Ch. 102), Specific Plans (L.A. County Code, Title 22, Ch. 22.46), Community Standards Districts (L.A. County Code, Title 22, Ch. 22.300 et seq.), and/or Coastal Resource Areas (L.A. County General Plan, Figure 9.3)?***

**No Impact.** The study area does not include a wildflower reserve area, an SEA, or a Sensitive Environmental Resource Area, and therefore would not affect any of these areas. Therefore, the project would not conflict with any local policies or ordinances. The site does not include any oak trees or oak woodlands, or other sensitive tree species, and therefore would not impact any species covered by the Los Angeles County Oak Tree Ordinance. The site is not within a Coastal Resource Area and would therefore not have an effect on a Coastal Resource Area.

***g. 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?***

**No Impact.** There is no adopted habitat conservation plan, natural community conservation plan, or other approved State, regional, or local habitat conservation plan applicable to private lands within the study area; therefore, the project would not conflict with provisions of any plans.

## 3.4.3 Mitigation Measures

**MM BIO-1: Habitat-Based Mitigation.** In order to mitigate for the loss of foraging habitat for Swainson's hawk, tricolored blackbird, and other special status migratory and resident birds, mitigation lands will be acquired.

Swainson's hawk: Impacts due to development of the project will be mitigated by the acquisition of good quality Swainson's hawk habitat targeted within the Antelope Valley. Land will be purchased and placed in a conservation easement or other suitable deed restriction and managed to maintain suitable habitat in perpetuity.

The proposed development is not expected to result in the "take" of Swainson's hawk, tricolored blackbird, or other species of special concern.

Although the project is not expected to result in "take" of Swainson's hawk, tricolored blackbird, or other species of special concern, mitigation will be required to alleviate the effects of direct and cumulative impacts on the habitat of raptors, tricolored blackbird, and other special-status bird species. In the unlikely event of take, the applicant will be required to consult, which may result in additional mitigation prescribed by CDFW.

Replacement land will be provided based on the quality of the mitigation land relative to the impacted habitat. The ratio of such replacement will be determined as follows:

- A ratio of 1 acre of replacement land for each 3 acres of development if the replacement land is superior foraging habitat contiguous to potential nesting and/or foraging habitat, and is within a designated or proposed Significant Ecological Area.
- A ratio of 1 acre of replacement land for each 2 acres of development if the replacement land is unoccupied irrigated land, contiguous to occupied habitat and provides superior quality foraging habitat.
- A ratio of 1 acre of replacement land for each 1 acres of development if the replacement land provides similar foraging habitat.

**MM BIO-2: Pre-Construction Burrowing Owl Take Avoidance Survey.** Qualified biologists will conduct a preconstruction burrowing owl survey throughout the study area no less than 14 days prior to the start of construction or ground disturbing activities. Survey methodology shall follow that described in the 2012 CDFW Staff Report on Burrowing Owl Mitigation as appropriate for the season in which the preconstruction surveys commence. Owl surveys can be conducted concurrently with preconstruction desert kit fox and American badger surveys as described below in MM BIO-8. If no owls are found within the study area, construction may proceed as planned.

If burrowing owls are detected on site, no ground-disturbing activities, such as vegetation clearance or grading, will be permitted within a buffer of no fewer than 330 feet (100 meters) from an occupied burrow during the breeding season (February 1–August 31). During the nonbreeding (winter) season (September 1–January 31), ground-disturbing work may proceed near active burrows as long as the work occurs no closer than 165 feet (50 meters) from the burrow. Depending on the level of disturbance, if smaller buffers are set, they will be per established CDFW protocol.

If active burrows cannot be avoided, a Burrowing Owl Exclusion Plan will be prepared following established CDFW protocols. The plan shall describe all necessary measures to minimize impacts on burrowing owls during passive relocation, including details on how owls will be removed and excluded from burrows, the methodology to do so, where the owls will be moved to, and whether any follow-up monitoring will be required.

**MM BIO-3 through MM BIO-5: Wildlife Protections.**

**MM BIO-3:** Workers will be prohibited from bringing pets to the project site and from feeding, harassing, collecting, or otherwise harming wildlife.

**MM BIO-4:** Burrowing owls, mammals, and nesting birds can use construction pipes, culverts, or similar structures for refuge or nesting. Therefore, all construction pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods will be covered or capped while in storage, or will otherwise be thoroughly inspected for special-status wildlife or nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe will not be moved until a biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated by a biologist.

**MM BIO-5:** To prevent inadvertent entrapment of wildlife during construction or decommissioning activities, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps constructed of earth fill or secured wooden planks measuring at least 12 inches wide. Larger excavations and trenches measuring 100 feet or greater will be outfitted with at least two escape ramps and one every 100 feet. All holes and trenches, whether covered or not, will be inspected for trapped wildlife at the start and end of each workday. Immediately before such holes or trenches are filled, they will be thoroughly inspected by the biological monitor for trapped wildlife. If trapped animals are observed, escape ramps or structures will be installed immediately to allow escape. If a listed species is found trapped, all work will cease immediately in the vicinity of the trapped animal. If the animal is apparently uninjured, then a biologist will directly supervise the provision of escape structures and/or trench modification to allow the trapped animal to escape safely. Work will not resume in the vicinity of the animal, and it will be allowed to leave the work area and project site on its own. If the listed animal is injured, then a biologist will immediately extricate the animal and bring it to a pre-identified veterinary/rehabilitation facility and notify the USFWS and/or CDFW of the incident.

**MM BIO-6: Nesting Raptors and Migratory Birds.** Initial ground disturbance and vegetation removal will be scheduled outside the nesting bird season (approximately February 1 to September 15), if feasible.

If construction cannot be scheduled outside of the nesting bird season, a qualified wildlife biologist will conduct pre-construction surveys of all potential nesting habitat within the project site. Preconstruction surveys for nesting raptors will cover potential raptor nesting sites within 500 feet of the project site and within 100 feet of the project site for all other migratory birds, where accessible. Surveys will be conducted no more than 3 days prior to construction activities, and the surveying biologist must be qualified to determine the status and stage of nesting without causing intrusive disturbance.

If active nests are detected during the preconstruction surveys, a suitable buffer from construction activities (500 feet for raptors and up to 300-feet for other species, at the discretion of the qualified biologist) will be applied until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged or the nest has failed). A qualified biologist will check the nest status at least once per week, using the least invasive method feasible (e.g. observation with binoculars from a distance). These buffers may be reduced at the discretion of a qualified biologist with sufficient avian experience as long as the nesting birds continue to behave normally and do not show signs of stress caused by construction.

**MM BIO-7: Trash Management.** During Construction, trash and food items will be contained in closed containers and removed daily to reduce the attractiveness to opportunistic predators, such as common ravens, coyotes, and feral dogs. Fruit peels, nut and seed shells, eggshells, chicken bones, and other food waste are not natural to the desert and will be placed in a trash receptacle.

**MM BIO-8: Burrow Surveys.** Preconstruction burrow surveys will be conducted by a qualified biologist for the presence of American badger or desert kit fox dens no more than 14 days prior to commencement of construction activities. If dens are detected, each den will be classified as inactive, potentially active, active non-natal, or active natal. Active dens will be flagged and project activities within 200 feet (non-natal dens) or 500 feet (natal dens) should be avoided. Buffers may be modified by the qualified biologist, in coordination with CDFW and with notification to the County. Active natal dens (i.e., any den with cubs or pups) will not be excavated or passively relocated.

# 3.5 Cultural Resources

| | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| c. Disturb any human remains, including those interred outside of dedicated cemeteries? | ☐ | ☒ | ☐ | ☐ |

## 3.5.1 Environmental Setting

Cultural resources include prehistoric resources; historic buildings, structures, objects, districts, and sites; and sites and resources of concern to Native American and other ethnic groups. A Cultural Resources Assessment (CRA) consisting of a cultural resources records search, additional research, reconnaissance-level pedestrian field survey, Native American Heritage Commission (NAHC) Sacred Lands File Search, and vertebrate paleontological resources overview was conducted for the proposed project (BCR 2020, Appendix C). The findings of the report are summarized in this section; portions of the CRA specific to tribal cultural resources are detailed in Section 3.18, Tribal Cultural Resources. Paleontological Resources are discussed in Section 3.8, Geology and Soils.

Prior to fieldwork, a records search was conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and at the Southern San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield. This archival research reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports completed within one mile of the current project. Additional resources reviewed included the National Register of Historic Places (National Register), the California Register, and documents and inventories published by the California Office of Historic Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures. Data from the SCCIC and the SSJVIC revealed that seven previous cultural resource studies have taken place, and three cultural resources have been identified within one mile of the project site. One previous study has assessed a portion of the project site and no cultural resources have been identified within its boundaries. The nearest resource is a historic-period road (West Avenue D) which will be crossed by the project gen-tie alignment. None of the previous studies have assessed the project site and no cultural resources have been identified within its boundaries.

A reconnaissance-level cultural resources field survey of the project site was conducted between March 23 and April 17, 2020, and on July 24, 2020. During the field survey, BCR Consulting archaeologists identified no cultural resources (including historic-period or prehistoric

archaeological sites, or historic-period architectural resources) of any kind. Observations noted that the project site has been subject to severe disturbances associated with terracing to maximize gravity irrigation and recent discing for weed abatement. The gen-tie alignments have been subject to excavation, grading, and paving associated with road construction and utility installation and maintenance. Vegetation consisted of seasonal grasses and afforded surface visibility of approximately 30 percent. Sediments included fine sandy silt with very few rocks. None of the naturally occurring materials observed during the field survey exhibited evidence of the manufacture or acquisition of prehistoric stone tools or materials. Furthermore, a Native American consultation in accordance with AB 52 was conducted for the proposed project. On 10/28/20 and 12/4/20, the County of Los Angeles contacted two tribes, the San Gabriel Band of Mission Indians (Gabrieleno Band) and the Serrano Historical Tribal Territory (San Manuel Band of Mission Indians). No responses were received, and consultation was closed on 1/4/21. On May 11, 2021 the San Manuel Band of Mission Indians (SMBMI) provided post-consultation comments on the project stating SMBMI does not have any concerns with the project's implementation, as planned, at this time due to the nature and location of the proposed project, and given the Cultural Resources Management Department's present state of knowledge. SMBMI did request specific language be made a part of the project/permit/plan conditions, which have been incorporated into **MM CUL-1**, **MM CUL-2**, **MM CUL-3**, **MM TCR-1**, and **MM TCR-2**. Additional information is provided in Section 3.18, Tribal Cultural Resources.

## 3.5.2 Project Impacts

***a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?***

**Less Than Significant Impact with Mitigation.** As discussed in the CRA, no historical resources were identified within the project site. Although no historical resources were found within the project site, there is a possibility that ground-disturbing activities related to project construction could uncover previously unknown, buried cultural materials, resulting in a potentially significant impact. The implementation of MM CUL-1, MM CUL-2, and MM CUL-3, which outline procedures to be followed in the event of an inadvertent discovery of historical resources, would reduce impacts to less than significant.

***b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?***

**Less Than Significant Impact with Mitigation.** No archaeological resources were identified within the project site in the CRA. Although no archaeological resources were found within the project site, there is a possibility that ground-disturbing activities related to project construction could uncover previously unknown, buried cultural materials, resulting in a potentially significant impact. The implementation of MM CUL-1, MM CUL-2, and MM CUL-3, which outline procedures to be followed in the event of an inadvertent discovery of archaeological resources, would reduce impacts to less than significant.

***c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?***

**Less Than Significant Impact with Mitigation.** No previously recorded sites with human remains were identified within the project site and the records search and the field survey indicate no evidence of human remains on or near the project site. Project-related earth disturbance, however, has the

potential to unearth previously undiscovered remains, resulting in a potentially significant impact. However, implementation of MM CUL-3, that describes procedures to be followed in the event that human remains are discovered, would ensure that impacts are reduced to a less than significant level.

## 3.5.3 Mitigation Measures

**MM CUL-1:** Prior to the issuance of any grading permit, applicants shall provide written evidence to the County of Los Angles that a County-certified archaeologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate.

If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the project applicant, for exploration and/or salvage. Prior to the release of the grading bond the applicant shall obtain approval of the archaeologist's follow-up report from the County. The report shall include the period of inspection, an analysis of any artifacts found and the present repository of the artifacts. Applicant shall prepare excavated material to the point of identification.

Applicant shall offer excavated finds for curatorial purposes to the County of Los Angeles, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the County. Applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County or its designee, all in a manner meeting the approval of the County.

Unanticipated discoveries shall be evaluated for significance by a County-certified archaeologist. If the archaeological resources are found to be significant, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the County of Los Angeles, or its designee, on a first refusal basis; and provide a comprehensive final report including appropriate records for the California Department of Parks and Recreation (Building, Structure, and Object Record; Archaeological Site Record; or District Record, as applicable).

**MM CUL-2:** In the event cultural resources are encountered during construction of the project, all ground-disturbing activities within the vicinity of the find shall cease and a Native American Monitor shall be notified of the find. The Native American Monitor shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to recordation and excavation of the finds and evaluation and processing of the finds in accordance with § 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of, but are not limited to, stone, bone, fossils, wood or shell artifacts or features, including hearths, structural remains, or historic dumpsites.

If the resources are determined to be unique historic resources as defined under § 15064.5 of the CEQA Guidelines, Mitigation Measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate Mitigation Measures for significant resources could include but not be limited to avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further earthwork shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered because of mitigation would be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.

**MM CUL-3:** In the event of an accidental discovery or recognition of any human remains, California State Health and Safety Code § 7050.5 dictates that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to CEQA regulations and PRC § 5097.98.

Additionally, **MM TCR-1**, and **MM TCR-2**, as described in Section 3.18, will be incorporated into project construction and will reduce potentially significant impacts to tribal cultural resources to less than significant.

# 3.6 Energy

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

## 3.6.1 Environmental Setting

The project proposes to increase electricity generated from renewable technology by generating up to 21 MW of electrical energy through a series of PV solar panel arrays that convert sunlight into electrical energy without the use of heat transfer fluid or cooling water. The project also includes up to 28 MW of energy storage capacity that will charge during the day, then discharge onto the SCE grid via one of three options described above in the project description. Energy consuming devices that are part of the proposed project during the operational phase include security lighting, data monitoring system, thermal management systems, switchgear equipment and communications equipment. Electrical power for these devices will be obtained from the project. For construction activities, electrical power is expected to be obtained from an on-site generator.

California policy encourages the development of renewable energy resources to reduce reliance on fossil fuels; to diversify energy portfolios; to reduce GHG emissions; and to assist creation of "green" jobs within the state of California. The State RPS was established in 2002 under SB 1078 and accelerated in 2006 under SB 107 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010. Subsequent recommendations in California energy policy reports advocated a goal of 33 percent by 2020, and in 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring that all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020. SB X1-2 was signed by Governor Brown, Jr., in 2011, setting the RPS target at 33 percent by 2020. This new RPS applied to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities had to adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020. In 2015 Governor Brown signed into legislation SB 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. The California Public Utilities Commission and the California Energy Commission are jointly responsible for implementing this program. Most recently, Governor Jerry Brown signed SB 100 in September 2018, which set a target of 60 percent renewable electricity by 2030, and 100 percent renewable electricity by 2045.

The proposed project qualifies as an eligible renewable energy resource as defined by the California PRC Section 25740 et seq. and would assist the electric service provider in meeting its RPS requirements.

## 3.6.2 Project Impacts

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

**Less Than Significant Impact.** The County Code (Title 21, Section 21.24.440) requires compliance with applicable requirements of the County Title 22 Green Building standards (Section 22.126.040) and the State Title 24 Green Building Code. These standards are applicable to construction of buildings and are designed to reduce energy consumption, save water and other natural resources, and divert waste from landfills when new buildings are constructed. The proposed project is for renewable energy electricity generation and does not include the construction of habitable buildings. Therefore, the Title 24 Green Building standards are not applicable. The proposed project has been designed to minimize disturbed areas by keeping grading on the project site to a minimum. The proposed project would incorporate landscaping with native or non-native drought-tolerant vegetation approved by the County along portions of the perimeter of the project site. Irrigation via water trucks would be conducted until the landscaping is established, approximately 90 days. Therefore, the proposed project would not conflict with these two ordinances and impacts would be less than significant.

***b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?***

**Less Than Significant Impact.** The proposed project would generate renewable energy, decreasing California's reliance on fossil fuel energy and increasing its reliance on renewable energy. Both of these items are identified in Appendix F of the State CEQA Guidelines as ways to accomplish the CEQA energy conservation goal.

Non-renewable resources, including fossil fuels (i.e., energy), would be used in the construction of the proposed project. The daily vehicle trips during construction would generally include construction worker trips, and truck trips for equipment deliveries and water for dust suppression. Construction of the proposed solar facility is not unusually wasteful or excessive in terms of construction materials or fossil fuel use due to the lack of demolition and other waste products generated by typical construction projects (e.g., discarded woody debris). In addition, construction of these types of facilities is not energy-intensive, since minimal grading is required for construction, the facilities would be unmanned and would not generate significant operational vehicle trips, and minimal use of water is required for operations. Therefore, the proposed project would not involve the inefficient use of energy resources and impacts would be less than significant.

## 3.6.3 Mitigation Measures

Project implementation would not result in significant impacts related to energy. Therefore, no mitigation is required.

# 3.7 Geology and Soils

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. | Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i. | Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42. | ☐ | ☐ | ☐ | ☒ |
| ii. | Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| iii. | Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ |
| iv. | Landslides? | ☐ | ☐ | ☐ | ☒ |
| b. | Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |
| c. | Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | ☐ | ☐ | ☒ | ☐ |
| d. | Be located on expansive soil, as defined in Table 1-81-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | ☐ | ☐ | ☒ | ☐ |
| e. | Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ |
| f. | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☒ | ☐ | ☐ |
| g. | Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, Ch.22.104)? | ☐ | ☐ | ☐ | ☒ |

## 3.7.1 Environmental Setting

This section is based on the Phase I Environmental Site Assessment (Appendix D) and Geotechnical Investigation Report prepared for the proposed project (Appendix E). Soils on the project site are composed primarily of well-drained granitic alluvium, including Rosamond Fine Sandy Loam.

Geologically, the project site is composed of unconsolidated and semi-consolidated Quaternary alluvium, lake, playa, and terrace deposits. The approximate depth to groundwater is 213 feet below grade surface (bgs), as reported at a water well located on the southeastern portion of the project site in March of 2021. Historically, groundwater in the Antelope Valley Groundwater Basin flows north from the San Gabriel Mountains and south and east from the Tehachapi Mountains toward Rosamond Lake and Rogers Lake.

As part of the CRA (BCR 2020), a paleontological resources records search was requested from the Western Science Center (WSC) in Hemet, California. A response was received from Darla Radford, Collections Manger, on March 20, 2020. The letter stated that, though the geologic units underlying the project site (Holocene alluvial units) are of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Late Pleistocene alluvial sediments would increase. If excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. The WSC does not have localities within the project site or within a 1-mile radius.

## 3.7.2 Project Impacts

***a. 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 active fault trace? Refer to Division of Mines and Geology Special Publication 42.***

**No Impact.** There are no known active faults traversing the project site, and the project site is not located within the Alquist-Priolo Earthquake Fault Zone or any other established fault zones (California Geological Survey [CGS] 2020). The San Andreas Fault is the nearest earthquake fault to the project site, and is located approximately 12 miles southwest of the project site. Thus, the project would not be exposed to fault rupture hazards along the San Andreas Fault, and no impact would occur. No mitigation is required.

***ii. Strong seismic ground shaking?***

**Less Than Significant Impact.** The primary seismic hazard for the project site, as with most of the southern California region, is the susceptibility to ground shaking due to the presence of major active or potentially active faults in the region. The design and construction of the Project would comply with all applicable building codes and standards established by regulatory agencies including the Los Angeles County Department of Public Works and the latest California Building Code to minimize damage in the event of an earthquake. Additionally, no project structures are habitable structures and would therefore pose very low risk of loss, injury or death. Complying with all applicable building codes and standards would reduce project impacts to levels that are less than significant.

***iii. Seismic-related ground failure, including liquefaction?***

**Less Than Significant Impact.** Potential secondary seismic effects of strong seismic ground shaking include liquefaction, lateral spreading, and seismically induced settlement/differential compaction. Liquefaction is defined as a loss of strength of saturated, cohesionless soil generally due to seismic

shaking. Soil types most susceptible to liquefaction are loose, saturated silty to clean fine sands. The project site lies within the Little Buttes Quadrangle (USGS 2005). There are no Zones of Required Investigation for liquefaction or earthquake-induced landslides within the evaluated Los Angeles County part of the Little Buttes Quadrangle. Therefore, the potential for hazards from liquefaction and subsequent lateral spreading on this site should be negligible. Additionally, the Geotechnical Investigation Report concluded that, due to the poorly sorted and coarse-grained materials that are anticipated to underlie the project site area and the absence of a shallow groundwater table, the potential for liquefaction at the project site is low. Seismically induced settlement consists of dry dynamic settlement (above groundwater) and liquefaction-induced settlement (below groundwater). During a strong seismic event, seismically induced settlement can occur within loose to moderately dense sandy soil due to reduction in volume during, and shortly after, an earthquake event. Some seismically induced settlement may occur within the on-site younger sandy alluvial soils. Complying with all applicable building codes and standards would reduce project impacts to levels that are less than significant. Therefore, impacts would be less than significant, and no mitigation is required.

***iv. Landslides?***

**No Impact.** No natural or artificial slopes exist on or near the project site. Therefore, the risk of seismically induced landslides is not applicable, and no impact would occur.

***b. Would the project result in substantial soil erosion or the loss of topsoil?***

**Less Than Significant Impact.** Soil erosion and the loss of topsoil could occur during grading and construction of the proposed project. The potential impacts of soil erosion on the project site would be minimized through implementation of a SWPPP in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. The SWPPP would prescribe temporary BMPs to control wind and water erosion during and shortly after construction of the project. With implementation of BMPs as prescribed in the SWPPP, the impact on soil erosion and the loss of topsoil would be less than significant, and no mitigation measures are required.

***c. 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?***

**Less Than Significant Impact.** Project site soils are composed of fine sandy loam and stratified loam to silty clay loams (Appendix D). Since the static groundwater level near the project site is 213 feet bgs, the potential for hazards from liquefaction and subsequent lateral spreading or landslides on this site should be negligible. The region has historically undergone a significant amount of subsidence ranging from greater than 6 feet near the City of Lancaster to 3–4 feet near the project site (USGS 2016). Historical and continued depletion of water is expected to result in future land subsidence throughout the Antelope Valley. The annual water consumption for operations of the facility, including periodic PV module washing, is expected to be approximately 1.02 acre-feet, and is not expected to exacerbate existing groundwater depletion or subsequent collapse. Complying with the latest California Building Code requirements would reduce project impacts to levels that are less than significant.

***d. Would the project be located on expansive soil, as defined in Table 1-81-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?***

**Less Than Significant Impact.** Expansive soils generally have a significant amount of clay particles which can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils. Soils on the project site generally do not contain large amounts of clay and would not exhibit significant shrink or swell. The geotechnical investigation collected three samples from 0-5' below ground surface; the samples were classified as non-expansive soils. Therefore, impacts of the project development would be less than significant.

***e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

**No Impact.** The proposed project would not include toilets, kitchens, or bathrooms that would generate wastewater requiring disposal into the sewer system or a septic tank. Thus, the on-site soils would not pose limitations to septic tanks or alternative waste water disposal systems since none are proposed as part of the project. Therefore, no impact would occur.

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

**Less than Significant Impact with Mitigation.** As previously mentioned, the WSC does not have known fossil localities within the project site or within a 1-mile radius. Although the likelihood of encountering paleontological resources within the approved project site is considered low, there is a possibility that paleontological materials would be uncovered if excavations for the construction of the proposed project requires any substantial depth of disturbance. Therefore, this impact is potentially significant. The implementation of MM GEO-1, the development of a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) by a qualified paleontologist if construction excavation depth is below six feet or more below current grade, would reduce this potential impact to a less than significant level.

***g. Would the project conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, Ch.22.104)?***

**No Impact.** The project site is flat and is not in or near any hillside area with 25 percent or greater slope, and therefore not required for development as a Hillside Management Area. No impact will occur.

## 3.7.3 Mitigation Measures

**MM GEO-1:** Prior to the issuance of any grading permit, applicants shall provide written evidence to the County of Los Angles that a County-certified paleontologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue paleontological resources as necessary. The paleontologist shall develop and execute a PRMMP, shall be present at the pre-grade conference, shall establish procedures for paleontologist resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. The PRMMP would outline the procedures to follow with respect to paleontological resources (e.g. monitoring protocols, curation, data recovery of fossils, reporting). If fossils are found during such excavation, the paleontological monitor shall be authorized to halt ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment according to the Program.

If the paleontological resources are found to be significant, the paleontologist observer shall determine appropriate actions, in cooperation with the project applicant, for exploration and/or salvage.

Prior to the release of the grading bond the applicant shall obtain approval of the paleontologist's follow-up report from the County. The report shall include the period of inspection, an analysis of any artifacts found and the present repository of the artifacts. Applicant shall prepare excavated material to the point of identification. Applicant shall offer excavated finds for curatorial purposes to the County of Los Angeles, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the County. Applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County or its designee, all in a manner meeting the approval of the County.

Unanticipated discoveries shall be evaluated for significance by a County-certified a paleontologist. If the paleontological resources are found to be significant, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the County of Los Angeles, or its designee, on a first refusal basis; and provide a comprehensive final report including appropriate records for the California Department of Parks and Recreation.

# 3.8 Greenhouse Gas Emissions

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

## 3.8.1 Environmental Setting

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$). GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of each GHG is multiplied by the prevalence of that gas to produce carbon dioxide equivalent ($CO_2e$). AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is the source of substantial amounts of GHG emissions. In order to avert these consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020. In 2016, the legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels (CARB 2018). Most recently, Governor Jerry Brown signed SB 100 in September 2018, which set a target of 60 percent renewable electricity by 2030, and 100 percent renewable electricity by 2045 (California State Senate 2018).

The project site is currently undeveloped and does not directly generate GHG emissions due to the absence of on-site water use, energy use, and vehicle trip generation. The AVAQMD's CEQA and Federal Conformity Guidelines established the AVAQMD GHG Significance Threshold of 100,000 tons of $CO_2e$ per year for long-term operational and short-term construction emissions (AVAQMD 2016). A project with emissions rates below this threshold is considered to have a less than significant impact on climate change.

## 3.8.2 Project Impacts

***a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

**Less than Significant Impact.** Construction and operation of the proposed project would generate and release emissions of GHGs into the environment. During construction, GHG emissions would result from off-road diesel equipment exhaust, from vehicle trips for worker travel, material delivery, and hauling, and electricity due to water use.

Construction GHG emissions were estimated using a combination of emission factors and methodologies from CalEEMod, version 2016.3.2 (Trinity Consultants 2017); CARB's EMFAC2017 model (CARB 2017); and project-specific construction data (e.g., schedule, equipment, truck volumes)

provided by the project applicant. Construction would occur in two phases: Site Preparation and Grading, and PV/BESS/Gen-Tie Installation. Construction was assumed to occur 5 days per week and last approximately 11 months, beginning in October 2021. See Appendix A for a complete list of construction assumptions, including equipment, and vehicles.

Project-related construction GHG emissions are summarized by phase in Table 3.8-1. As shown, maximum daily GHG emissions from project construction would be 16,174 pounds of $CO_2e$, which would not exceed AVAQMD's threshold of 548,000 pounds of $CO_2e$ daily.

Additionally, for the purpose of assessing the proposed project's annual operational GHG emissions, the total construction emissions generated over the 11-month construction period are amortized over the anticipated 35-year life of the project and the resulting annual construction emissions are added to the project's annual operational emissions. As such, the total (i.e., over the entire construction period) and amortized GHG emissions are also presented in Table 3.8-1.

**Table 3.8-1. Estimated Short-Term Construction-Related GHG Emissions**

| | Total GHG Emissions per Phase[a] | |
|---|---|---|
| Construction Phase | Annual (Tons/year) | Daily (lbs/day) |
| Site Preparation & Grading | 485 | 16,174 |
| PV/BESS/Gen-Tie Installation | 1,330 | 14,776 |
| Summary of Construction Emissions[b] | 1,818 | 16,174 |
| Amortized (35-Year Project Life) | 52 | N/A |

[a] Totals may not add up due to rounding.
[b] Annual summary presented as total emissions, daily summary presented as maximum daily emissions
N/A = not applicable
Modeling details included in Appendix A.

Once operational, the proposed project would result in GHG emissions from resource consumption associated with periodic off-road equipment use for panel washing, on-road vehicle operations, and electricity due to water use, while providing renewable energy generation that would offset electricity produced by the statewide grid and support statewide clean energy goals. The total emissions impact of the project would be the net difference between its operational emissions and the emissions displaced from its generation of renewable energy.

Per the project applicant, the 21-MW facility is expected to generate approximately 64,480 MWh/year. This renewable energy generated by the proposed project would displace GHG emissions that would be otherwise generated in the electrical grid by non-renewable resources. Because additional renewable resources will be integrated into the statewide electrical grid as a result of the RPS, the annual displaced emissions achieved by the project would decline as a function of time (i.e., reductions per MWh would reduce as the grid gets cleaner, meaning the emissions that are displaced would reduce over time). Lifetime GHG reductions were quantified assuming a 35-year design life for the panels and linear integration of additional renewables into the statewide grid, up to 100 percent by 2045, pursuant to SB 100. The net effect on operational emissions on both an annual (opening year) basis and over the project's 35-year lifetime is presented in Table 3.8-2 and Table 3.8-3, respectively. Overall operation of the proposed project is estimated to displace 3,393 tons of $CO_2e$ of emissions annually and a total of 118,759 tons of $CO_2e$ of emissions over the 35-year project life. Please refer to Appendix A for further detail on energy displacement calculations, including emission factors (lbs of $CO_2e$/MWh).

As shown in Table 3.8-2, periodic panel washing during operations would generate five tons of $CO_2e$ per year. Together with amortized construction, the total annual GHG emissions would be approximately 57 tons of $CO_2e$. The renewable energy generated by the project would offset about 3,393 tons of $CO_2e$ per year of grid-supplied electricity, resulting in an annual net GHG reduction of approximately 3,336 tons $CO_2e$.

**Table 3.8-2. Estimated Annual Greenhouse Gas Emissions from Project Operation (tons of $CO_2e$ per year)**

| Source | Annual GHG Emissions (tons CO2e per year) |
|---|---|
| Total Annual Operational Emissions[a] | 5 |
| Amortized Construction | 52 |
| Total Annual Project Emissions[a] | 57 |
| Displaced grid energy | 3,393 |
| Net emissions[b] | -3,336 |
| AVAQMD Thresholds | 100,000 |
| Exceed Threshold? | No |

[a] Totals may not add up due to rounding.
[b] Annual average tons CO2e that would be displaced annually, over the 35-year project life.
Modeling details included in Appendix A.

As shown in Table 3.8-3, over the 35-year lifetime of the project, emissions (the sum of construction and operational emissions) would total approximately 2,010 tons of $CO_2e$. The renewable energy generated during the 35 years of project operation would offset an estimated 118,759 tons of $CO_2e$. These displaced emissions would result in a total net GHG reduction of approximately 116,749 tons of $CO_2e$ over the project life.

**Table 3.8-3. Estimated Total Greenhouse Gas Emissions from Project Lifetime Operation (tons of $CO_2e$)**

| Source | GHG Emissions (total tons $CO_2e$ over Project Lifetime)[b] |
|---|---|
| Total Operational Emissions[a] | 192 |
| Total Construction Emissions | 1,818 |
| **Total Project Emissions** | **2,010** |
| Total displaced Emissions[c] | 118,759 |
| **Net emissions** | **-116,749** |

[a] Total Operational Emissions are based on opening year Operational GHG emissions multiplied by 35.
[b] Totals may not add up due to rounding.
[c] Total tons of $CO_2e$ that would be displaced over the 35-year project life.
Modeling details included in Appendix A.

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.

A Decommissioning Plan for the proposed project would be prepared and submitted to the County for approval prior to the issuance of a CUP and grading permit. This Decommissioning Plan would ensure that the project site is returned to a pre-construction, beneficial use should termination of the

proposed solar energy generation uses be required. The solar field components included in the proposed project would continue to operate for approximately 35 years, which is the useful life of the PV panels. It is assumed that decommissioning of the project site would require the same construction scenario (e.g., activities, equipment, duration) as the initial development of the project site; however, future GHG impacts would be less than those currently projected due to anticipated advancements in technology and a cleaner-burning construction equipment fleet mix. Therefore, GHG impacts related to decommissioning would also be less than significant.

***b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

**Less than Significant Impact with Mitigation.** AB 32 and SB 32 establish statewide goals to reduce GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030, respectively. CARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32 goals. The latest *2017 Climate Change Scoping Plan*, which outlines a path to achieve the SB 32 target goal, outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. The *2017 Climate Change Scoping Plan* includes implementation of the RPS as an individual measure. The RPS promotes multiple objectives, including diversifying the electricity supply. Increasing the renewable energy supply towards 100 percent zero-carbon by 2045 is designed to accelerate the transformation of the electricity sector, including investment in the transmission infrastructure and system changes to allow integration of large quantities of intermittent wind and solar generation. The proposed project would add renewable solar-generated energy to the electricity supply and result in an emissions benefit. As such, the proposed project facilitates the statewide goal of reducing GHG emissions.

With respect to local plans adopted for the purpose of reducing GHG emissions, the Los Angeles County's Community Climate Action Plan (CCAP), adopted in 2015, supplements the County's general plan and describes the County's plan to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11 percent below 2010 levels by 2020 (LACDRP 2015). Local community actions include green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting (LACDRP 2015). While the CCAP will be expired by the time the proposed project is constructed and operational (2022), many of the measures in the existing CCAP will continue to be implemented and result in emission benefits well beyond 2020 timeframe. The 2020 Los Angeles County CAP has been drafted and will serve as a replacement of the 2015 CCAP. The CAP proposes 17 strategies to address new targets including carbon neutrality by 2045, and 50 percent below 2015 emission levels by 2035. The CAP's proposed measures are included in this consistency analysis ahead of the plan's expected adoption.

The consistency of the proposed project with the applicable measures in the County's 2015 CCAP and Draft 2020 CAP are analyzed in Tables 3.8-4 and 3.8-5, respectively. As shown, the proposed project would be inconsistent with two measures in the 2015 CCAP and one measure in the 2020 CAP prior to mitigation. However, after implementation of **MM GHG-1**, which limits idling time of construction equipment, and requires the project applicant prioritize use of electric off-road equipment, the proposed project would be consistent with the County's current CCAP and draft 2020 CAP. Accordingly, after implementation of mitigation, impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be less than significant.

**Table 3.8-4. Consistency of the Proposed Project with Applicable 2015 CCAP Measures**

| Local Actions | Proposed Project Consistency |
|---|---|
| **Green Building and Energy** | |
| BE-4 (Alternative Renewable Energy Programs): Implement pilot projects for currently feasible wind, geothermal, and other forms of alternative renewable energy. | **Consistent.** The proposed project is the construction and operation of a utility-scale solar-generating facility with a 21 MW capacity. Once operational, the facility will generate up to 64,480 MWh per year. |
| **Land Use and Transportation** | |
| LUT-9 (Idling Reduction Goal): Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer's specifications. | **Consistent After Mitigation. MM GHG-1** requires all commercial vehicles and heavy-duty construction equipment used during project construction to limit idling time to 3 minutes. |
| LUT-12 (Electrify Construction and Landscaping Equipment): Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment. | **Consistent After Mitigation. MM GHG-1** requires the project applicant search for and prioritize the use of electric construction equipment where feasible. |
| **Water Conservation and Wastewater** | |
| WAW-1 (Per Capita Water Use Reduction Goal): Meet the State established per capita water use reduction goal, as identified by SB X7-7 (The Water Conservation Act of 2009) for 2020. | **Consistent.** Water use during implementation of the proposed project would be minimal and would be limited to dust suppression during construction and a maximum of two panel washing events per year during operations. The project applicant will prioritize the use of recycled water where feasible during construction and operation of the proposed project. Recycled or non-potable water would be provided by the local water wholesaler, AVEK. |
| WAW-2 (Recycled Water Use, Water Supply Improvement Programs, and Storm Water Runoff): Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes. Manage stormwater, reduce potential treatment, and protect local groundwater supplies. | **Consistent.** Water use during implementation of the proposed project would be minimal and would be limited to dust suppression during construction and a maximum of two panel washing events per year during operations. The project applicant will prioritize the use of recycled water where feasible during construction and operation of the proposed project. Recycled or non-potable water would be provided by AVEK. |

**Table 3.8-5. Consistency of the Proposed Project with Applicable Draft 2020 CAP Measures**

| Local Actions | Proposed Project Consistency |
|---|---|
| **Transportation** | |
| **T28:** Partner with SCAQMD and AVAQMD to encourage the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment. | **Consistent After Mitigation. MM GHG-1** requires the project applicant search for and prioritize the use of electric construction equipment where feasible. |

| Local Actions | Proposed Project Consistency |
|---|---|
| **Stationary Energy** | |
| **SE9:** Promote the use of recycled water and gray water to be used for agricultural and industrial purposes. | **Consistent.** Water use during implementation of the proposed project would be minimal and would be limited to dust suppression during construction and a maximum of two panel washing events per year during operations. The project applicant will prioritize the use of recycled water where feasible during construction and operation of the proposed project. Recycled or non-potable water would be provided by either the AVEK or LACWD40. |
| **SE17:** Use County's role in the CPA to encourage 100% renewable energy resource mix by 2025. | **Consistent.** The proposed project is the construction and operation of a utility-scale solar-generating facility with a 21 MW capacity. Once operational, the facility will generate up to 64,480 MWh per year. |

## 3.8.3 Mitigation Measures

**MM GHG-1: Implement Diesel Emission-Reduction Measures During Construction.** To control emissions during construction, the project proponent/operator and/or its contractor(s) shall implement the following measures during construction of the proposed project, subject to verification by the County:

1. Electric equipment shall be used to the extent feasible in lieu of diesel or gasoline-powered equipment.
2. If procurement of electric equipment is not feasible, off-road equipment engines over 50 horsepower shall be equipped with EPA Tier 4 or Tier 4 Interim (i), unless Tier 4/4i construction equipment is not available within 50 miles of the project site.
3. If procurement of Tier 4/4i equipment is not feasible, off-road equipment engines over 50 horsepower shall be equipped with EPA Tier 3, unless Tier 3 construction equipment is not within 50 miles of the project site.
4. The project proponent/operator and/or its leading contractor shall submit a letter of attestation to the County prior to commencement of construction activities stating that electric, Tier 4/4i, or Tier 3 equipment shall be used, or that those technologies are not available.
5. Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use. Maximum idling time shall be reduced to less than 3 minutes.

# 3.9 Hazards and Hazardous Materials

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. | Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b. | Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☒ | ☐ | ☐ |
| c. | Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses? | ☐ | ☐ | ☒ | ☐ |
| d. | Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☐ | ☒ |
| e. | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| f. | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |
| g. | Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires, because the project is located: | | | | |
| i. | within a high fire hazard area with inadequate access? | ☐ | ☐ | ☐ | ☒ |
| ii. | within an area with inadequate water and pressure to meet fire flow standards? | ☐ | ☐ | ☒ | ☐ |
| iii. | within proximity to land uses that have the potential for dangerous fire hazard? | ☐ | ☐ | ☒ | ☐ |
| h. | Does the proposed use constitute a potentially dangerous fire hazard? | ☐ | ☐ | ☒ | ☐ |

## 3.9.1 Environmental Setting

A Phase I Environmental Site Assessment (ESA) has been prepared for the project site describing the past and current hazardous material on and near the project site (Appendix D). Additionally, the Phase I ESA prepared for the Raceway 2.0 Project evaluated the proposed gen-tie line option corridors (Appendix F). The ESAs each included user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. The ESAs were conducted consistent with the procedures included in ASTM E1527-13. The findings of the reports are summarized in this section.

The project site is vacant and does not utilize hazardous materials or generate hazardous wastes. The project site has been utilized as agricultural land, and the agricultural practice of crop production often includes the use of pesticides and/or herbicides. Indications of pesticide and/or herbicide misuse or vegetative stress on the site or surrounding properties were not observed during the project site reconnaissance.

There are no known hazardous materials, petroleum products, hazardous wastes, or petroleum wastes on the project site. Four Underground Storage Tanks (USTs) were found during the records search, however these USTs were erroneously listed to be located on the project site. The USTs are located approximately 5 miles west of the project site and do not constitute a Recognized Environmental Concern (REC) to the site. One 55-gallon drum was observed on the eastern portion of the project site. The drum was not labeled, and the contents could not be identified. Leakage, spills or releases from the drum were not observed. Based on site observations, the 55-gallon drum does not represent a REC to the site.

During interviews, the ESA documented that SCE transmission lines and underground pipelines may possibly be present in the project site area. In addition, the interview noted that heavy equipment used for agricultural purposes may have been stored on the site and petroleum hydrocarbons could be present related to the equipment. During site reconnaissance, no indicators of contamination were observed on site.

During the site reconnaissance, two wells and an associated pump were observed on the southern portion of the site. Based on the records search, five other wells were reported to be located adjacent to the two identified wells. However, during the site reconnaissance, there was no evidence of wells in these locations.

The project site and gen-tie corridor are not located in State or Local Responsibility areas designated as Very High or High Fire Hazard Severity Zones (California Department of Forestry and Fire Protection [CAL FIRE] 2007, 2007a).

The Raceway 2.0 Project would involve construction and operation of two solar photovoltaic (PV) power-generating facilities, on six discontinuous sites on 1,330 acres of land in unincorporated Kern County. In addition, the proposed project would include the construction of a gen-tie line with four options (Option 1A and 1B, Option 2, Option 3, or Option 4) to interconnect the proposed project to the existing SCE transmission system (Kern County 2021). RECs were not identified in the Phase I ESA prepared for the Raceway 2.0 Project (Appendix F).

## 3.9.2 Project Impacts

***a. Would the project Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?***

**Less Than Significant Impact.** The project would not utilize, store, or produce hazardous materials that would pose a significant hazard to the public. Hazardous waste would not be generated on-site. Field equipment used during construction will contain various hazardous materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, and other petroleum-based products contained in construction vehicles; however, the level of hazardous materials used, or waste generated on the project site are anticipated to be negligible. Used biodegradable dielectric fluid and mineral oil from the transformers and miscellaneous electrical equipment are potentially hazardous materials. The project expects oil-filled equipment to be delivered to the project site filled with product upon arrival. If spent oil is generated, or in the event of a spill, the project would comply with Department of Toxic Substance Control regulations, specifically the California Code of Regulations (CCR) Title 22, Division 4.5, Environmental Health Standards for the Management of Hazardous Waste. The project would give preference to recycling over disposal, where recycling is allowed and viable, or the spent oil would be recycled at an accepting facility. This material will not be stored on-site. During operations, maintenance vehicles fueled by gasoline will be present on-site, but no hazardous materials will be stored on-site during operations.

Solar panels will be made of silicone but may also include heavy metals such as silver, copper, lead, arsenic, cadmium, selenium that at certain levels may be classified as hazardous wastes (California Department of Toxic Substances Control [DTSC] 2020). Unlike a typical industrial setting, solar panel materials are not readily susceptible to spills or accidental releases. In general, a solar panel must be treated as hazardous waste when they are disconnected or removed from service. Recently passed legislation authorizes the California DTSC to adopt regulations to designate used/spent solar panels that are hazardous wastes as universal waste. Until the new regulations are adopted, solar panels that exhibit characteristics of hazardous waste must be managed as hazardous wastes in accordance with CCR Title 22, Division 4.5. Like other hazardous wastes, hazardous waste solar panels must be managed according to all applicable hazardous waste laws and regulations, including obtaining an authorization for conducting treatment.

The BESS would contain lithium-ion and lithium metal cells and batteries, which are listed as Class 9 Miscellaneous hazardous materials in the United States; however, the manufacturers will take back damaged or dead lithium-ion batteries and recycle them.

Compliance with existing DTSC hazardous material regulations would ensure that the use of common hazardous materials during construction activities and operation of the proposed project would be less than significant.

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

**Less Than Significant Impact.** The ESA reveals no evidence of recognized hazardous materials or conditions on-site, except for its former use as agricultural land and the presence of a 55-gallon drum with unidentified contents. Historical agricultural activities on the site may have included the use of herbicides and pesticides; however, these compounds tend to biodegrade over time, and residual concentrations of these chemicals are rarely discovered at levels requiring regulatory action. Still, it

is possible that there could be residual soil contamination from the historic use of herbicides or pesticides at the project site. Ground-disturbing construction activities could potentially result in the release of contaminated soil into the environment, which would be a significant impact. MM HAZ-1 would be implemented as described below to ensure proper identification, handling, and disposal of contaminated soils if they are encountered on the project site. The 55-gallon drum will need to be removed from the project site prior to construction and could result in a release of hazardous materials if not handled correctly. MM HAZ-2 would be implemented as described below to ensure proper identification, handling, and disposal of the contents of the 55-gallon drum on the project site. With the implementation of MM HAZ-1 and MM HAZ-2, construction impacts would be less than significant.

During operations, the PV solar panels would require cleaning to remove dust buildup, grime, bird droppings, and/or soot. Solar panels are susceptible to damage and become inefficient with the use of poor-quality water. The water used for the panel cleaning process would not contain any toxic chemicals. Cleaning water would be allowed to infiltrate into the ground or evaporate as it drips off the PV modules. As described above, used biodegradable dielectric fluid and mineral oil from the transformers and miscellaneous electrical equipment are potentially hazardous materials. The spent oil will be collected and delivered to a recycling company at the time it is removed from the equipment. This material will not be stored on-site; thus, minimizing the potential for release.

Flammable or potentially explosive materials that will be used on-site include those normally utilized during construction including gasoline, solvents, and welding gasses. Exact quantities to be stored are not yet known but will be limited to what is needed for the specific construction activity being completed during each day of construction. Materials will be stored according to applicable rules and regulations governing hazardous materials storage. During operations, maintenance vehicles fueled by gasoline will be present on-site, but no hazardous materials will be stored on-site during operations.

Therefore, impacts to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste would be less than significant with mitigation.

***c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?***

***Less Than Significant Impact.*** There are several residences adjacent to the project site and gen-tie line corridor. As discussed above, the project would not lead to hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste, other than limited use of common hazardous materials during construction in accordance with applicable regulations. Therefore, impacts to nearby sensitive land uses would be less than significant**.**

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

**No Impact.** As identified in the ESAs, the project site is not included on a list of hazardous materials sites compiled pursuant to Section 65962.5 of the California Government Code. The project would not create a significant hazard to the public or the environment. Therefore, the project would result in no impact associated with hazardous materials sites.

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

**No Impact.** Little Buttes Antique Airfield is located approximately 1.5 miles southeast of the project site and the Rosamond Skypark Association is located approximately 5.5 miles northeast of the project site. Both have very low use levels. No airfield noise contours have been developed for Little Buttes Antique Airfield or Rosamond Skypark Association. The proposed project would not create residences or other land uses that would be sensitive to aircraft noise. All project features would be outside the airfield properties. Consequently, there are no impacts from airport-related noise or safety hazards.

***f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

**No Impact.** 90th Street West is a Secondary Disaster Route for the County of Los Angeles (Los Angeles County 2012). The proposed construction would be staged on-site and would have a short-term impact on circulation. The project would not result in any closures of existing roadways that might have an effect on emergency response or evacuation plans in the vicinity of the project site. Accordingly, implementation of the project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

***g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires, because the project is located:***

***i. within a high fire hazard area with inadequate access?***

**No Impact.** The project site is not in or near areas designated as a Very High or High Fire Hazard Severity Zone. Therefore, no impact would occur.

***ii. within an area with inadequate water and pressure to meet fire flow standards?***

**Less Than Significant Impact.** See discussion below. Impacts related to fire flow will be less than significant.

***iii. within proximity to land uses that have the potential for dangerous fire hazard?***

**Less Than Significant Impact.** See discussion below. Impacts related to dangerous fire hazards would be less than significant.

***h. Does the proposed use constitute a potentially dangerous fire hazard?***

***Less Than Significant Impact.*** However, the project site and surrounding area primarily consists of open space with annual grasslands, which remain dry for most of the year and have the potential to burn. Several residences are located adjacent to the project site. A residence and agricultural structures are located directly adjacent to the southwest portion of the project site, and approximately three residences and an equestrian facility are located to the north along West Avenue A. Additionally, a residence is located approximately 450 feet from the project site, southwest of the intersection of West Avenue A-8 and 95th Street West. The introduction of general human activity, including maintenance workers or the driving of combustion engine vehicles, increases the potential risk for dangerous fire hazard. Construction activities, such as welding during installation of PV panels and support structures, could also potentially result in the combustion of native materials.

The project would be required to comply with the County Code's Title 32, Fire Code, which includes various requirements for fire safety and prevention. In compliance with Title 32, vegetation be trimmed to a maximum height of 6 inches within the project site boundaries and cleared to mineral soil for a distance of 50 feet around all electrical transformer vaults or structures. As the project is located in an undeveloped area, there are no fire hydrants or other piped water supplies to the project site. The project would include a network of internal access roads, which would provide emergency access to remote portions of the project site, as well as water tank(s) with a total minimum capacity of 10,000 gallons for use by the LACFD for fire control. Compliance with the County's Fire Code would ensure that impacts related to fire control would be less than significant.

## 3.9.3 Mitigation Measures

**MM HAZ-1: Prepare and Implement a Soil Management Plan.** Prior to the commencement of soil-disturbing construction activities, AES shall retain a licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer with experience in contaminated site redevelopment and restoration to prepare and submit a Soil Management Plan to the County for review and approval. After the County's review and approval, AES shall implement the Soil Management Plan, which shall include the following components, as applicable:

- A *Site Contamination Characterization Report* (Characterization Report) delineating the vertical and lateral extent and concentration of residual contamination from the site's past uses in areas where soil would be disturbed. The Characterization Report shall include a compilation of data based on historical records review and from prior reports and investigations and, where data gaps are found, include new soil sampling to characterize the existing vertical and lateral extent and concentration of residual contamination. The Characterization Report will determine whether a Soil Testing and Profiling Plan, a Soil Disposal Plan, and a Site Worker Health and Safety Plan are necessary. These additional plans are described below.
- A *Soil Testing and Profiling Plan* (Testing and Profiling Plan) for materials that shall be disposed of during construction. Testing shall occur for all potential contaminants of concern, which may include CA Title 22 metals, PAHs, VOCs, herbicides, pesticides, PCBs, TPH, PAHs, or any other potential contaminants, as specified within the Testing and Profiling Plan. The Testing and Profiling Plan shall document compliance with CA Title 22 for proper identification and segregation of hazardous and solid waste as needed for acceptance at a CA Title 22–compliant offsite disposal facility. The Testing and Profiling Plan will include requirements for monitoring of excavation activities, as applicable.
- A *Soil Disposal Plan* (Disposal Plan), which shall describe the process for excavation, stockpiling, dewatering, treating, and loading and hauling of soil from the site. This plan shall be prepared in accordance with the Testing and Profiling Plan (i.e., in accordance with CA Title 22 and DOT Title 40 CFR Part 263, California Code of Regulations Title 27), and current industry best practices for the prevention of cross contamination, spills, or releases. Measures shall include, but not be limited to, segregation into separate piles for waste profile analysis based on organic vapor, and visual and odor monitoring.
- A *Site Worker Health and Safety Plan* (Safety Plan) to ensure compliance with 29 CFR Part 120, Hazardous Waste Operations and Emergency Response regulations for site workers at uncontrolled hazardous waste sites. The Safety Plan shall be based on the Characterization Report and the planned site construction activity to ensure that site workers potentially exposed to contamination in soil are trained, equipped, and monitored during site activities. The training, equipment, and

monitoring activities shall ensure that workers are not exposed to contaminants above personnel exposure limits established by Table Z, 29 CFR Part 1910.1000. The Safety Plan shall be signed by and implemented under the oversight of a California State Certified Industrial Hygienist.

**MM HAZ-2: Characterize and Dispose of Contents of 55-Gallon Drum.** Prior to obtaining a grading permit, AES shall retain a licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer with experience in hazardous materials characterization to sample the contents of the 55-gallon drum and dispose of the contents in accordance with all federal, state, and local regulations. The City of Los Angeles has a Conditionally Exempt Small Quantity Generator (CESQG) program for collecting Hazardous Waste from businesses in Los Angeles County. The project applicant may contact the City Program at (213) 485-2260 for available options for the 55-gallon drum found within the project area.

# 3.10 Hydrology and Water Quality

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. | Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☐ | ☒ | ☐ |
| b. | Significantly decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ☒ | ☐ |
| c. | Substantially alter the existing drainage pattern of the site or area, including through the alteration of a Federal 100-year flood hazard area or County Capital Flood floodplain; the alteration of the course of a stream or river; or through the addition of impervious surfaces, in a manner which would: | | | | |
| i | Result in substantial erosion or siltation on- or off- site? | ☐ | ☐ | ☒ | ☐ |
| ii. | Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | ☐ | ☐ | ☒ | ☐ |
| iii. | Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | ☐ | ☐ | ☒ | ☐ |
| iv. | Impede or redirect flood flows which would expose existing housing or other insurable structures in a Federal 100-year flood hazard area or County Capital Flood floodplain to a significant risk of loss or damage involving flooding? | ☐ | ☐ | ☒ | ☐ |
| d. | Otherwise place structures in Federal 100-year flood hazard or County Capital Flood floodplain areas which would require additional flood proofing and flood insurance requirements? | ☐ | ☐ | ☐ | ☒ |
| e. | Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)? | ☐ | ☐ | ☒ | ☐ |
| f. | Use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)? | ☐ | ☐ | ☐ | ☒ |

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| g. | In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☐ | ☒ |
| h. | Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ☒ | ☐ |

## 3.10.1 Environmental Setting

The project site is located in a sparsely developed, rural area of north Los Angeles County. The project site is relatively flat with an approximately 0-2 percent slope, draining to the east, and primarily consists of disturbed/ruderal habitat and non-native grasslands. The project site is not located within a 100-year floodplain (Federal Emergency Management Agency [FEMA] 2008).

The project site is located within the Antelope Valley Watershed, which is located in the western Mojave Desert. This large and flat basin receives water from the San Gabriel Mountains through Big Rock Creek, Little Rock Creek, and Armargosa Creek, and the Tehachapi Mountains through Oak Creek and Cottonwood Creek. The watershed is a flat, closed basin with low to moderate slopes along with some hilly regions. The Antelope Valley has no outlets to the ocean, and therefore the streams of water that start at the region's mountains and foothills travel through the valley floor toward the region's dry lakes.

The project site overlies the Antelope Valley Groundwater Basin, which is located within the South Lahontan Hydrologic Region and is bounded on the northwest by the Garlock Fault Zone at the base of the Tehachapi Mountains and on the southwest by the base of the San Gabriel Mountains. The Antelope Valley groundwater basin (Basin No. 6-44) has been identified for beneficial uses including municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and freshwater replenishment (FRSH) (LRWQCB 2019).

## 3.10.2 Project Impacts

***a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

**Less Than Significant Impact.** The project is not expected to use any form of wastewater or generate any wastewater or hazardous waste during construction. However, equipment used during construction would contain hazardous materials such as hydraulic oil, diesel fuel, and other products contained within construction vehicles and equipment.

As required by the Clean Water Act and other federal regulations, any construction project that disturbs 1.0 acre or more must obtain an NPDES Construction General Permit and implement a SWPPP (California Water Boards 2020). The purpose of a SWPPP is to identify and implement BMPs to reduce impacts to surface water from contaminated stormwater discharges. Development and implementation of a SWPPP would apply to both the construction and post-construction phases of the project, such as revegetation. Upon construction of the solar facilities, temporary BMPs would be

implemented until such a time that vegetation has been restored or permanent BMPs are in place and functioning. Compliance with the implemented SWPPP would reduce any impacts to water quality to less than significant.

***b. Would the project significantly decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

**Less Than Significant Impact.** The project would require minimal amounts of water during its lifespan. Approximately 53 acre-feet of water would be required during construction. Water required for operations use is limited to cleaning the solar PV panels up to two times per year and for irrigating landscaping. The drought-tolerant landscape would be irrigated three times a week for 90 days and as-needed for survival, but no long-term irrigation infrastructure is planned. Monthly landscape maintenance is planned for the life the project. The annual water consumption for operation of the facility is expected to be approximately 1.02 acre-feet.

Potential sources of water may include on-site or off-site wells, recycled water, or water trucked in from the local municipality. The applicant may also purchase water from a privately-owned local well owner with adjudicated rights. Well owner production rights have annual volume limits thereby controlling groundwater deficits. Since a modest amount of water use is planned for the operation and maintenance of the project, the project would not significantly deplete groundwater supplies. Additionally, negligible impervious surface would be created as part of the project, resulting in minimal effects to groundwater recharge; therefore, less than significant impacts are anticipated.

***c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of a Federal 100-year flood hazard area or County Capital Flood floodplain; 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?***

***Less Than Significant Impact.*** The proposed project would result in some grading activities but would not substantially increase impervious surfaces or alter the existing drainage patterns in a way that would result in substantial erosion or siltation. To account for potential modifications to flow and increases in offsite erosion and siltation, the project would conform to the County's LID Ordinance by having an LID-compliant site plan, including maintaining natural drainage paths and landscape feature to slow and filter runoff; and vegetated stormwater detention basins for onsite infiltration. Therefore, a less than significant impact is anticipated.

***ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;***

***Less Than Significant Impact.*** Grading and ground disturbance for the project would be minimal and primarily limited to access roads, equipment pads (including inverter-transformer pads and project switchgear), BESS, and water tanks. The techniques used to install the solar PV panels include pile-driving, which minimizes the need for excavating. The construction of the project would not substantially increase impervious surfaces and as there are no streams or rivers on-site, the grading activities would not substantially increase the rate or amount of surface runoff; however, to account for potential modifications to flow and increases in off-site erosion and siltation, the project would conform to the County's LID Ordinance by having an LID-compliant site plan, therefore, impacts would be less than significant.

***iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or***

**Less Than Significant Impact.** The grading and ground disturbance planned for the project would be minimal and would follow existing terrain. The project's LID-compliant site plan would provide additional measures to mitigate potential impacts to the existing site drainage patterns; therefore, impacts would be less than significant.

***iv. Impede or redirect flood flows which would expose existing housing or other insurable structures in a Federal 100-year flood hazard area or County Capital Flood floodplain to a significant risk of loss or damage involving flooding?***

**Less Than Significant Impact.** The project site is not located within a 100-year floodplain. Planned grading would be minimal and follow the existing terrain, with no substantial cut and fill that could adversely impact the floodplain depth, velocity, or top width. The PV solar panels are planned to be spaced intermittently and would be supported by 6-inch diameter posts with a typical height of approximately 6–10 feet. It is anticipated that the PV solar panels would not pose an obstruction to flow and would have a less than significant impact on the existing floodplain.

***d. Otherwise place structures in Federal 100-year flood hazard or County Capital Flood floodplain areas which would require additional flood proofing and flood insurance requirements?***

**No Impact.** The project site is not located within a 100-year flood hazard area or a County Capital Flood floodplain area. Therefore, no impact will occur.

***e. Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?***

**Less Than Significant Impact.** The LID standards indicate that development should mimic undeveloped storm water runoff rates and volumes in any storm event, including Capital Floods produced by a 50-year frequency design storm, prevent pollutants of concern from leaving the development site in stormwater, and minimize hydromodification impacts to natural drainage systems. Design of the project, as outlined in Figure 2-9, Site Plan, is consistent with the LID Ordinance; therefore, impacts would be less than significant.

***f. Use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)?***

**No Impact.** The project would not generate any wastewater and does not include an on-site wastewater facility; therefore, no impact will occur.

***g. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?***

**No Impact.** The project site is located approximately 55 miles north of the nearest coastline and is outside the tsunami inundation areas along the coast. The nearest enclosed body of water is the Fairmont Reservoir, which is located over 10.5 miles southwest of the project site. Due to the distance of all enclosed bodies of water, no seiche-related flooding is anticipated to occur at the project site. The topography of the project site is relatively level and is not located within or adjacent to any

mapped landslide zones; therefore, mudslides are unlikely to occur. No impacts related to seiche, tsunami, or mudflow would occur.

***h. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

**Less Than Significant Impact.** The project site is located within the Antelope Valley Groundwater Basin, which is located within the South Lahontan Hydrologic Region and is subject to the applicable requirements of the Basin Plan administered by the RWQCB in accordance with the Porter Cologne Water Quality Control Act. As discussed above, the project would include required BMPs and drainage control requirements that would be consistent with the Basin Plan.

The Antelope Valley Area of Adjudication covers approximately 1,390 square miles within the Antelope Valley Groundwater Basin (Antelope Valley Watermaster 2019). Potential sources of water for the proposed project may include on-site or off-site wells, recycled water, or water trucked in from the local municipality. The applicant may also purchase water from a privately-owned local well owner with adjudicated rights. Well owner production rights have annual volume limits thereby controlling groundwater deficits. Since a modest amount of water use is planned for the operation and maintenance of the project, the project would not significantly deplete groundwater supplies. Additionally, negligible impervious surface would be created as part of the project, resulting in minimal effects to groundwater recharge. Therefore, the project would not conflict with the groundwater management of the area and potential impacts would be less than significant.

# 3.11 Land Use

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a. | Physically divide an established community? | ☐ | ☐ | ☒ | ☐ |
| b. | Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ |
| c. | Conflict with the goals and policies of the General Plan related to Hillside Management Areas or Significant Ecological Areas? | ☐ | ☐ | ☐ | ☒ |

## 3.11.1 Environmental Setting

SCE owns and operates several transmission and sub-transmission lines in the project vicinity. Specifically, there is a 66- kV sub-transmission line on the eastern side of 90th Street West. A 500 kV transmission line, 220 kV transmission line, and a 66 kV sub-transmission line run south to north, approximately one mile west of the project site.

The County of Los Angeles Antelope Valley Area Plan designates the project site and surrounding areas as Rural Land. Several residences are located adjacent to the project site. A residence and agricultural structures are located directly adjacent to the southwest portion of the project site, and approximately three residences and an equestrian facility are located to the north along West Avenue A. Additionally, a residence is located approximately 450 feet from the project site, southwest of the intersection of West Avenue a-8 and 95th Street West. The surrounding landscape is primarily dominated by fallow agricultural land.

The project site is located in Los Angeles County and designated as "Rural Land 10" (RL10 - Maximum density of 1 residential unit for each 10 gross acres of land) according to the Los Angeles County Antelope Valley Area Plan: Town & Country (LACDRP 2015). The project site is zoned "A-2-2" (Heavy Agricultural – 2 Acre Minimum Required Lot Area) on the County Zoning Ordinance (LACDRP 2020) as shown in Figure 4, Existing County Zoning and Land Use. Pursuant to the County Code, a ground-mounted utility-scale solar energy facility ("solar facility") is an allowed use in the A-2 Zone requiring a CUP (LACDRP 2015a). Adjacent land to the west, south, and east is also zoned "A-2-2." Land adjacent to the project site in Kern County is designated as Suburban residential and Light Industrial (Kern County 2020).

## 3.11.2 Project Impacts

***a. Would the project physically divide an established community?***

**Less Than Significant Impact.** The project site is not located within a residential area. Although there are residences located north and southwest of the project site, they are isolated and are not part of an existing established community. The land around the project site is largely vacant. Therefore, the

proposed project would not divide an established community, and impacts would be less than significant.

***b. 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?***

**No Impact.** The proposed project would comply with the plan designations and applicable provisions of the County General Plan and associated Area Plan. The project is not located within the boundaries of a Community Standards District. The Area Plan Land Use Policy Map places the project site outside an Economic Opportunity Area (LACDRP 2015). The proposed project is consistent with the applicable County plans for the project site and would be designed in compliance with applicable regulations and conditions pertaining to renewable facilities; therefore, no impact would occur. The project is also consistent with Area Plan goals that call for the development of renewable energy resources while preserving and protecting the natural and rural environments of the Antelope Valley.

***c. Would the project conflict with the goals and policies of the General Plan related to Hillside Management Areas or Significant Ecological Areas?***

**No Impact.** The project is not within the boundaries of a designated Hillside Management Area, Significant Ecological Area, EOA or other applicable land use criteria. Therefore, no impact will occur.

## 3.11.3 Mitigation Measures

Project implementation would not result in significant impacts related to land use and planning. Therefore, no mitigation is required.

# 3.12 Mineral Resources

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

## 3.12.1 Environmental Setting

A review of maps provided by the CDC, Division of Oil, Gas, and Geothermal Resources (DOGGR) shows that the project site does not contain oil, gas, or geothermal resources (CDC DOGGR 2001), and there are no wells within or near the project (CDC DOGGR 2020). Additionally, the County General Plan indicates that there are no Mineral Resource Zones within or near project site (Los Angeles County 2020). The CDC, Division of Mines and Geology (DMG) indicates that the project is located within the Palmdale Production-Consumption Region (the market area of a mineral commodity), and is classified as a Mineral Resource Zone 3 (MRZ-3), which includes large areas that contain "aggregate resources of unknown significance" (CDC DMG 1983).

## 3.12.2 Project Impacts

***a. 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?***

**No Impact.** The project is located in an area designated as an MRZ-3 (CDC DMG 1983), which includes large areas that contain aggregate mineral resources of unknown significance. As such, the project would not result in an impact to a known mineral resource that would be of value to the region and residents of the state. No impact would occur.

***b. 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?***

**No Impact.** As discussed above, the County General Plan indicates that there are no Mineral Resource Zones within or near project site (Los Angeles County 2020). The project site is not located in a Mineral Resource Zone as delineated in the Antelope Valley Area Plan Mineral Resources Zones Map (LACDRP 2015).

## 3.12.3 Mitigation Measures

Implementation of the project would not result in significant impacts related to mineral resources. As such, no mitigation would be required.

# 3.13 Noise

| | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project result in: | | | | |
| a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies? | ☐ | ☒ | ☐ | ☐ |
| b. Generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ |
| c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☒ | ☐ |

## 3.13.1 Noise Fundamentals

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is often defined as sound that is objectionable because it is unwanted, disturbing, or annoying.

Continuous sound can be described by its frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch; a high-frequency sound is perceived as high-pitched. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source correlates with the loudness of that source. The amplitude of a sound is typically described in terms of sound pressure level (SPL), also referred to simply as the sound level, which is measured in decibels (dB). The decibel is a logarithmic unit that describes the ratio of the actual sound pressure to a reference pressure. Because decibels represent noise levels using a logarithmic scale, sound pressure levels cannot be added, subtracted, or averaged through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions.

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by characteristics of the human ear. Human hearing is limited in the range of

audible frequencies as well as in the way it perceives the sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within that range better than sounds of the same amplitude at higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted (i.e., adjusted), depending on human sensitivity to those frequencies. The resulting sound pressure level is expressed in A-weighted decibels, or dBA. The A-weighting scale approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted sound levels of those sounds.

Because sound levels can vary markedly over a short period of time, various descriptors or noise "metrics" have been developed to quantify environmental and community noise. These metrics generally describe either the average character of the noise or the statistical behavior of the variations in the noise level. Some of the most common metrics used to describe environmental noise, including those metrics used in this report, are described below:

- **Equivalent Sound Level ($L_{eq}$)** is the most common metric used to describe short-term average noise levels. Many noise sources produce levels that fluctuate over time; examples include mechanical equipment that cycles on and off or construction work, which can vary sporadically. The $L_{eq}$ describes the average acoustical energy content of noise for an identified period of time, commonly 1 hour. Thus, the $L_{eq}$ of a time-varying noise and that of a steady noise are the same if they deliver the same acoustical energy over the duration of the exposure. For many noise sources, the $L_{eq}$ will vary, depending on the time of day. A prime example is traffic noise, which rises and falls, depending on the amount of traffic on a given street or freeway.
- **Maximum Sound Level ($L_{max}$)** and **Minimum Sound Level ($L_{min}$)** refer to the maximum and minimum sound levels, respectively, that occur during the noise measurement period. More specifically, they describe the root-mean-square sound levels that correspond to the loudest and quietest 1-second intervals that occur during the measurement.
- **Percentile-Exceeded Sound Level ($L_{xx}$)** describes the sound level exceeded for a given percentage of a specified period. For example, the $L_{50}$ is the sound level exceeded 50 percent of the time (such as 30 minutes per hour), and $L_{25}$ is the sound level exceeded 25 percent of the time (such as 15 minutes per hour).
- **Community Noise Equivalent Level (CNEL)** is a measure of the 24-hour average A weighted noise level that is also time-weighted to "penalize" noise that occurs during the evening and nighttime hours when noise is generally recognized to be more disturbing (because people are trying to rest, relax, and sleep during these times). 5 dBA is added to the $L_{eq}$ during the evening hours of 7 p.m. to 10 p.m.; 10 dBA is added to the $L_{eq}$ during the nighttime hours of 10 p.m. to 7 a.m.; and the energy average is then taken for the whole 24-hour day.
- **Day-Night Sound Level ($L_{dn}$)** is very similar to the CNEL described above. $L_{dn}$ is also a time-weighted average of the 24-hour A-weighted noise level. The only difference is that no "penalty" is applied to the evening hours of 7 p.m. to 10 p.m. 10 dBA is added to the $L_{eq}$ during the nighttime hours of 10 p.m. to 7 a.m., and the energy average is then taken for the whole 24-hour day.

## 3.13.2 Environmental Setting

The project site is located in western Antelope Valley in rural, unincorporated Los Angeles County. Kern County lies directly north of the project site, along West Avenue A. The land to the west, south, and east of the project site is zoned as Heavy Agriculture (LACDRP 2020). Land to the north of the project site in Kern County is designated as Suburban residential and Light Industrial (Kern County 2020). Land uses surrounding the project site are generally a mix of vacant lands and sparsely-distributed homes. Site preparation and grading would require approximately 60 days, while the PV system and BESS installation would last approximately 180 days.

Noise-sensitive receptors include residences, hospitals, schools, childcare facilities, and places of assembly (LACDRP 2015). Nearby sensitive receptors include a single-family residential property located directly adjacent to the southwest portion of the project site and approximately three residences and an equestrian facility are located to the north along West Avenue A. Single-family residences are also located approximately 0.1-mile, 0.4-mile, and 0.5-mile from the project site, southwest of the intersection of West Avenue A-8 and 95th Street West. Additional single-family residential properties are located 0.2-mile west from the northwest corner of the site, 0.4-mile west from northwest corner of the site, 0.5-mile west from the western site boundary, 0.5-mile east of the eastern site boundary, and several properties are located to the northeast along 90$^{th}$ Street West, ranging from approximately 0.1- to 0.3-mile from the northeast corner of the project site. There are no other residences, schools, or other sensitive receptors within 0.5-mile of the project site.

The proposed project would include a proposed gen-tie line that would extend outside of the project site boundaries. The gen-tie line would be installed along segments of 90th Street West, Avenue A-8, 95th Street West, West Avenue B, and 110th Street West, and would ultimately connect to the Big Sky North Substation. Along these roadways, existing residential dwellings are currently located either adjacent to, or in the vicinity of, 95th Street West, Avenue B, and 110th Street West where the potential gen-tie line would be installed.

The existing noise environment in the project vicinity is generally quiet because there are no nearby major noise sources, such as freeways, railroads, or industrial activities. In order to document existing noise levels in the study area, two short-term (ST) measurements were obtained in the project vicinity between Tuesday, December 1, 2020 and Wednesday, December 2, 2020. Additionally, two long-term (LT) noise measurements were also conducted from Tuesday, December 1 to Wednesday December 2, 2020 in the project area, with one measurement near the eastern property line of the residence located directly adjacent to the southwest portion of the project site, and one measurement along the northern boundary of the project site near the intersection of 95th Street West and West Avenue A. The measurement locations were selected to provide a representative sample of the existing ambient noise levels at and near the project site. Each of the ST measurements were conducted over a period of at least 15 minutes, while the LT measurements were conducted over a 24-hour period. For measurements ST-A, ST-B, and LT-A, the SLM microphone was mounted at a height of 5 feet above the ground. For measurement LT-B measurements the SLM microphone was mounted on a power pole approximately 8 feet above the ground. The noise measurement results are summarized in Table 3.13-1. All measurement locations are indicated on Figure 3.13-1. Field noise survey sheets are included in Appendix G of this document. Noise measurements indicate that the daytime ambient noise levels generally ranged between 38 and 66 dBA $L_{eq}$ in the project area. The LT noise measurements conducted indicate an average daily noise level that ranged between 43 and 71 dBA CNEL in the project area.

**Table 3.13-1. Measured Existing Noise Levels in Project Area**

| | | | Noise (dBA) | Levels |
|---|---|---|---|---|
| **Location Number: Description** | **Date** | **Time** | **$L_{eq}$** | **CNEL** |
| LT-A: Adjacent to the eastern property line of the residence located directly adjacent to the southwest portion of the project site. | 12/1/2020 to 12/2/2020 | Daytime (7 a.m. to 10 p.m.) | 38.1[1] | 42.5 |
| | | Nighttime (10 p.m. to 7 a.m.) | 35.4[2] | |
| LT-B: Along the northern boundary of the project site, approximately 230 feet east of the intersection of 95th Street West and West Avenue A. | 12/1/2020 to 12/2/2020 | Daytime (7 a.m. to 10 p.m.) | 66.3[1] | 71.4 |
| | | Nighttime (10 p.m. to 7 a.m.) | 64.5[2] | |
| ST-A: Approximately 0.25 mile southwest of project site and west of 95th Street West. | 12/2/2020 | 12:13 p.m. to 12:28 p.m. | 37.7 | NM |
| ST-B: Approximately 0.28 mile east of project site and north of West Avenue A-8. | 12/2/2020 | 11:45 a.m. to 12:00 p.m. | 37.5 | NM |

Note: NM = Not measured

[1] The value represents the average $L_{eq}$ noise level across the daytime period (i.e., 7 a.m. to 10 p.m.).

[2] The value represents the average $L_{eq}$ noise level across the nighttime period (i.e., 10 p.m. to 7 a.m.).

**Figure 3.13-1. Noise Measurement Locations**

## 3.13.3 Project Impacts

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

**Less than Significant with Mitigation.** Construction activities associated with the proposed project are anticipated to last approximately 11 months. During this time, temporary increases in noise levels in the project area would occur due to the operation of various construction equipment within the project site and in the areas outside of the site where the gen-tie line needs to be installed. Additionally, construction-related traffic consisting of worker and truck vehicles would also result in incremental increases in local roadway noise levels in the project area. After construction, operation of the proposed project would generate noise levels from the onsite operation of equipment (e.g., BESS and equipment pads), substation facility, and periodic maintenance activities such as panel washing. The potential construction- and operations-related noise impacts are discussed below.

**Construction Noise**

*Onsite Construction Activities*

The project site is located within Los Angeles County; however, directly north of the project site, across West Avenue A, is Kern County. As such, nearby sensitive receptors to the project site are located both in Los Angeles County and Kern County.[3] Thus, for the purposes of this analysis the noise regulations and standards that are applicable to each sensitive receptor, depending on their location either within Los Angeles County or Kern County, are used to evaluate the potential noise impacts resulting from construction of the proposed project.

Within Los Angeles County, construction noise levels are regulated per the requirements of Chapter 12.08 in the Los Angeles County Noise Ordinance, which establishes acceptable hours of construction as well as noise-level limitations on construction activities at nearby sensitive uses. Specifically, construction activities that creates a noise disturbance across a residential or commercial real-property line is prohibited between weekday hours of 7:00 pm and 7:00 a.m. or at any time of Sundays or holidays. Additionally, the County has also established construction noise standards that regulates the noise levels that can result from construction activities based upon their duration of operation. For single-family residential structures, which are the nearest sensitive receptors to the proposed project, the level of equipment and activity noise that is allowable from mobile equipment is 75 dBA. The Los Angeles County Noise Ordinance does not state a specific averaging time to be used for a noise measurement conducted pursuant to County noise regulations. A common averaging time for code enforcement is a 1-hour period. For the purpose of this analysis, the hourly $L_{eq}$ noise level for each of the proposed project's construction phases is assessed.

Kern County regulates construction noise levels per the requirements of Chapter 8.36 (Noise Control) in the Kern County Code of Ordinances, which establishes acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive uses. Specifically, construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling,

[3] The nearest receptors in Kern County are located within the Willow Springs Specific Plan (WSSP) area. The WSSP includes operational noise standards in addition to those established in the Kern County General Plan (Kern County 2008).

are prohibited between the hours of 9:00 p.m. and 6:00 a.m. on weekdays, and between 9:00 p.m. and 8:00 a.m. on weekends.

Construction-related noise was analyzed using data and modeling methodologies from the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) (FHWA 2008), which predicts average noise levels at nearby receptors by analyzing the type of equipment, the distance from source to receptor, usage factor (the fraction of time the equipment is operating in its noisiest mode while in use), and the presence or absence of intervening shielding between source and receptor. Given that the project site will occupy approximately 145 acres of the project site, construction activities would not occur across the entire project site at one time and would instead occur over smaller portions of the site on a daily basis over the course of the construction schedule. For the purpose of conducting a quantitative noise analysis for the proposed project, construction activities associated with the site preparation/grading phase at the project site were assumed to occur across an approximately 5-acre area that is nearest to each analyzed offsite receptor to estimate construction noise levels at that receptor. For the PV installation phase, which is anticipated to occur over 180 work days, construction activities were assumed to occur across an approximately 1-acre area at the project site that is nearest to each analyzed offsite receptor to estimate construction noise levels at that receptor.[4] To reflect the assumed distribution of equipment across the analyzed construction areas, source-to-receptor distances used in the analysis were the acoustical average distances between the construction area and each receptor.[5] For the gen-tie construction activities occurring offsite, the closest distance to the sensitive receptor was considered in the analysis. Additionally, given that the gen-tie construction work would occur in a relatively small construction area on a daily basis as the work progresses in a linear fashion along the gen-tie route, the single loudest piece of equipment associated with gen-tie construction (i.e., crane) was used in predicting the noise levels at the nearest sensitive receptor.

The noise levels generated by each individual piece of construction equipment associated with each of the different construction activities that would occur as part of the proposed project are shown in Table 3.13-2. These noise levels assume that construction equipment is generally well maintained and properly operated.

[4] It should be noted that the use of the 5-acre and 1-acre daily construction areas for the site preparation/grading and PV installation activities, respectively, is meant to serve as a reasonable estimate to allow for a quantitative assessment of the proposed project's potential noise levels in this analysis, and that the use of these estimates is not intended to place any restrictions on the actual daily acreage where these construction activities can occur at the project site. The actual construction area may be greater or less than the acreages applied in this analysis for the different activities. However, while multiple active construction areas may occur at different locations across the project site on a given day, the localized nature of noise is such that noise levels generated over a construction area nearest to a given receptor will dominate the noise environment over noise levels generated from a more distant location. Consequently, noise levels estimated from the nearest 5-acre construction area for the site preparation/grading phase and 1-acre construction area for the PV installation phase within the project site to a nearby offsite receptor would be representative of the noise exposure to that receptor during project construction.

[5] The acoustical average distance is used to represent noise sources that are mobile or distributed over an area (such as the analyzed construction area); it is calculated by multiplying the shortest distance between the receiver and the noise source area by the farthest distance and then taking the square root of the product.

**Table 3.13-2. Construction Activities and Equipment Noise Levels**

| Construction Activity | Equipment | Quantity[1] | Individual Equipment Noise Levels (dBA) at 50 Feet | |
|---|---|---|---|---|
| | | | $L_{eq}$ | $L_{max}$ |
| Site Preparation/Grading | Excavators | 1 | 77 | 81 |
| | Forklifts | 1 | 68 | 75 |
| | Generators | 1 | 78 | 81 |
| | Graders | 1 | 81 | 85 |
| | Off-highway trucks | 1 | 73 | 77 |
| | Rollers | 1 | 73 | 80 |
| | Rubber-tired dozers | 1 | 78 | 82 |
| | Skid steer loaders | 2 | 74 | 78 |
| | Tractors/loaders/backhoes | 1 | 75 | 79 |
| | Water trucks | 2 | 70 | 74 |
| PV Installation[2] | Cranes | 1 | 73 | 81 |
| | Drill rig (truck mounted) | 1 | 72 | 79 |
| | Forklifts | 1 | 68 | 75 |
| | Generators | 1 | 78 | 81 |
| | Post drivers | 3 | 81 | 88 |
| | Rubber-tired dozers | 1 | 78 | 82 |
| | Tractors/loaders/backhoes | 2 | 75 | 79 |
| | Water trucks | 2 | 70 | 74 |

Source: Federal Highway Administration 2008.

[1] The quantity of each equipment that is anticipated to operate at the project site during each construction activity.

[2] The PV installation equipment also accounts for those that will be used for the gen-tie line construction activities offsite.

For the purpose of this analysis, the composite hourly average noise levels for the multiple equipment items associated with each construction activity shown in Table 3.13-2 were calculated at a reference distance of 50 feet for use in estimating the noise levels at sensitive offsite receptors. The composite hourly average noise levels for each construction activity are shown in Table 3.13-3.

**Table 3.13-3. Composite Noise Levels for Each Construction Activity**

| Construction Activity | Average Composite Hourly Noise Level ($L_{eq}$) at 50 feet, dBA |
|---|---|
| Site Preparation/Grading | 86 |
| PV installation | 88 |

As shown in Table 3.13-3, the average hourly noise levels for the proposed project's construction activities would range from 86 to 88 dBA $L_{eq}$ at the reference distance of 50 feet, with the highest noise levels generated from the PV installation activities. For the off-site construction work associated with the project's gen-tie line, the single loudest piece of equipment associated with gen-tie construction,

which will be a crane that generates an hourly noise level of 73 dBA $L_{eq}$ at a distance of 50 feet, was used in predicting the noise levels at the nearest sensitive receptor given that the gen-tie construction work would occur in a relatively small construction area on a daily basis as the work progresses in a linear fashion along the selected gen-tie route.

Sensitive land uses in the project site vicinity that would be exposed to project construction noise levels include the sparsely distributed residential dwellings that are in the vicinity of the project site. For the purpose of this analysis, potential construction-related noise impacts resulting from the proposed project were assessed at 15 representative sensitive receptors nearest to and surrounding the project site as well as the proposed gen-tie route, as shown on Figure 3.13-2. While not all sensitive receptors in the project vicinity are analyzed for their noise exposure levels resulting from project construction, the noise levels at these receptors would be no worse than those predicted at the 15 analyzed receptor locations. Based on the noise levels generated by the project's various construction activities, the resulting noise levels at each of the 15 analyzed sensitive receptor locations were estimated with the highest noise levels shown in Table 3.13-4. As discussed previously, the project's on-site construction noise levels estimated at each analyzed receptor in this analysis use a source-to-receptor distance that represents the acoustical average distance between the construction area and each receptor in order to reflect the distribution of equipment across the construction area. For the gen-tie construction activities occurring offsite, which would occur in a relatively small area along the gen-tie route on a daily basis, the closest distance to the sensitive receptor was considered in the analysis. Detailed calculations are provided in Appendix G.

**Figure 3.13-2. Offsite Sensitive Receptors**

**Table 3.13-4. Estimated Construction Noise Levels at Nearby Sensitive Receptors**

| Receptor Description/Location | Distance to Nearest Project Site Boundary or Gen-tie Line[1] | Receptor County Location | Highest Estimated Average Hourly Noise Level (dBA $L_{eq}$) | Applicable Threshold |
|---|---|---|---|---|
| **SR1** – Single-family residential dwelling located west of the intersection of 95th Street West and West Avenue A. | Approximately 1,120 feet northwest of project site. | Kern County | 52 | NA[2] |
| **SR2** – Single-family residential dwelling located north of the project site, across West Avenue A. | Approximately 140 feet north of project site. | Kern County | 68 | NA[2] |
| **SR3** – Single-family residential dwelling located north of the project site, across West Avenue A. | Approximately 85 feet north of project site. | Kern County | 70 | NA[2] |
| **SR4** – Single-family residential dwelling located north of the project site, across West Avenue A. | Approximately 115 feet north of project site. | Kern County | 69 | NA[2] |
| **SR5** – Single-family residential dwelling located adjacently west of the project site. | Approximately 210 feet west of project site. | Los Angeles County | 67 | 75[3] |
| **SR6** – Single-family residential dwelling located southwest of the intersection of 95th Street West and West Avenue A-8. | Approximately 90 feet west of proposed gen-tie route on 95th Street West. | Los Angeles County | 66 | 75[3] |
| **SR7** – Single-family residential dwelling located southwest of project site and directly north of 97th Street West. | Approximately 1,050 feet west of proposed gen-tie route on 95th Street West. | Los Angeles County | 47 | 75[3] |
| **SR8** – Single-family residential dwelling located north of West Avenue B and west of 97th Street West. | Approximately 640 feet north of proposed gen-tie route on West Avenue B. | Los Angeles County | 45 | 75[3] |
| **SR9** – Single-family residential dwelling located south of the intersection of 110th Street West and West Avenue B. | Approximately 320 feet west of proposed gen-tie route on 110th Street West. | Los Angeles County | 52 | 75[3] |
| **SR10** – Single-family residential dwelling located south of the intersection of 110th Street West and West Avenue C. | Approximately 120 feet east of proposed gen-tie route on 110th Street West. | Los Angeles County | 63 | 75[3] |
| **SR11** – Single-family residential dwelling located south of the intersection of 110th Street West and Avenue C-8. | Approximately 180 feet west of proposed gen-tie route on 110th Street West. | Los Angeles County | 59 | 75[3] |

| Receptor Description/Location | Distance to Nearest Project Site Boundary or Gen-tie Line[1] | Receptor County Location | Highest Estimated Average Hourly Noise Level (dBA $L_{eq}$) | Applicable Threshold |
|---|---|---|---|---|
| **SR12** – Single-family residential dwelling located south of the intersection of 110th Street West and West Avenue D. | Approximately 555 feet west of proposed gen-tie route on 110th Street West. | Los Angeles County | 47 | 75[3] |
| **SR13** – Single-family residential dwelling located north of West Avenue E-8 and between 105th Street West and 110th Street West. | Approximately 1,140 feet east of proposed gen-tie route on 110th Street West. | Los Angeles County | 39 | 75[3] |
| **SR14** – Single-family residential dwelling located south of the intersection of 110th Street West and West Avenue F-8. | Approximately 125 feet east of proposed gen-tie route on 110th Street West. | Los Angeles County | 63 | 75[3] |
| **SR15** – Single-family residential dwelling located south of the intersection of 110th Street West and West Avenue G. | Approximately 115 feet west of proposed gen-tie line on 110th Street West. | Los Angeles County | 64 | 75[3] |

Note: NA = Not applicable.

[1] The distances are measured from the receptor structure to the project site boundary or gen-tie line, whichever is closer.

[2] Neither the Kern County General Plan nor the WSSP have identified noise limits pertaining to construction noise. Instead, construction noise is currently regulated in Chapter 8.36 (Noise Control) of the Kern County Code of Ordinances through the establishment of acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive uses.

[3] As discussed previously, the project's construction activities would not occur across the entire project site and instead would occur over smaller portions of the site on a daily basis over the course of the construction schedule. Given the transient nature of these construction activities, the County's 75 dBA construction noise standard for intermittent and short-term operation of mobile equipment at single-family residential structures is used as the applicable noise standard.

As shown in Table 3.13-4, the highest estimated construction-related noise levels that could result at nearby sensitive receptors over the course of project's construction period would range from 39 dBA $L_{eq}$ at Receptor SR14 to 70 dBA $L_{eq}$ at Receptor SR3. Of the 15 analyzed sensitive receptors, four receptors (i.e., SR1, SR2, SR3, and SR4) are located in the WSSP area of Kern County, while all other receptors are located within unincorporated Los Angeles County. Because these noise levels are associated with the highest noise-generating construction activity that happens to occur nearest to each analyzed receptor location, these noise levels would only occur over the duration of that activity and would not occur over the entirety of the project's approximately 11-month construction period. During quieter phases of construction or when construction activity moves farther away from the receptor, the noise levels would decrease. As such, the highest construction noise levels experienced at each analyzed sensitive receptor would only occur over a temporary period within the project's overall construction schedule.

Based on noise measurements conducted in the project area, the daytime ambient noise levels at nearby residential dwellings generally range from 38 to 66 dBA $L_{eq}$ (refer to Table 3.13-1). Therefore, project construction activities would, at times, be clearly audible above existing ambient noise levels at each of these analyzed sensitive receptors. With respect to sensitive receptors located in

unincorporated Los Angeles County, the estimated construction noise levels presented in Table 3.13-4 at these receptors show that they would not exceed the County's 75 dBA noise standard for single-family residential structures.

As discussed previously, construction noise is currently regulated in Chapter 8.36 (Noise Control) of the Kern County Code of Ordinances through the establishment of acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive uses. Specifically, construction activities that are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling, are prohibited from 9:00 p.m. to 6:00 a.m. on weekdays, and 9:00 p.m. to 8:00 a.m. on weekends. Although not anticipated, nighttime construction (if any) would be conducted in accordance with appropriate County safety, noise, and other requirements. This includes the Los Angeles County Noise Ordinance (Section 12.08), which prohibits construction (including demolition) noise disturbance across residential or commercial real-property lines Monday through Saturday, between the hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays. Given that the project's construction activities would all occur within Kern County's allowable construction hours on weekdays and weekends, the temporary increases in ambient noise levels at nearby sensitive receptors would also not occur during the evening or nighttime hours when residents are typically most sensitive to noise because they are trying to sleep or rest.

As described previously, the predicted noise levels assume that construction equipment is generally well maintained and properly operated, which would help to eliminate unnecessary and excessive noise. Therefore, MM NOI-1 is provided to ensure that construction equipment operations are consistent with these assumptions and that the project's construction activities would not generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the Los Angeles County's Noise Ordinance or the Kern County Code of Ordinances. With implementation of MM NOI-1, noise impacts due to onsite construction activity would be less than significant.

*Construction Traffic*

Construction worker vehicles and haul trucks, which would transport equipment and materials to and from the project site, would incrementally increase noise levels on the local roads in the project area. To evaluate the greatest impact the project could have on the adjacent roadway system, the construction phase with the highest truck trips was analyzed. This would occur during the site preparation/grading phase, where it is anticipated that a total of 68 worker vehicle trips and 104 heavy truck trips (combined inbound and outbound) would occur on a daily basis. It is anticipated that approximately 65 percent of the project's construction traffic would access the project site by way of West Avenue A from SR-14, and approximately 20 and 15 percent of the remaining construction traffic would access the project site on either 90th Street West or 110th Street West, respectively, from West Avenue G. Because these local access roads do not experience frequent traffic on a daily basis, the project's construction traffic noise would have the greatest effect on sensitive receptors along and near these roads. As such, for the purpose of this analysis, the roadway noise levels that would be generated from vehicular travel by the project's construction-related traffic were estimated and assessed against the Los Angeles County's average-daily noise level of 60 dBA CNEL

for single-family residential uses.[6] Additionally, while the single-family residences located north of the project site fronting West Avenue A are in Kern County, which has established an average daily noise level limit of 65 dB $L_{dn}$/CNEL for sensitive uses, for the purpose of conducting a conservative analysis the more stringent average daily noise level of 60 dBA CNEL from Los Angeles County is used to assess potential noise impacts at these receptors. The estimated roadway noise levels resulting from the proposed project's construction traffic are shown in Table 3.13-5.

**Table 3.13-5. Offsite Construction Traffic Noise Levels**

| Roadway | Roadway Segment | Project Construction Traffic Volume Noise Levels (dBA CNEL)[1] |
|---|---|---|
| West Avenue A | West of SR-14 | 55.5 |
| West Avenue G | West of SR-14 | 53.3 |
| 90th Street West | North of West Avenue G | 51.5 |
| 110th Street West | North of West Avenue G | 50.8 |

[1] The noise levels are estimated at a distance of 50 feet from the roadway center.

As shown in Table 3.13-5, the proposed project's peak day construction traffic noise levels on the local roadways that would be used to access the project site would range from approximately 51 to 56 dBA CNEL at 50 feet from the roadways. Therefore, the predicted construction traffic noise levels at nearby sensitive receptors along and near these roads would not exceed the Los Angeles County's average daily noise level of 60 dBA CNEL for single-family residential uses. Impacts related to construction-related traffic noise would be less than significant and no mitigation is required.

**Operational Noise**

*Stationary Noise Sources*

The primary operational noise sources associated with the project would be the substation, the BESS, and the equipment pads distributed throughout the solar arrays. To evaluate the noise levels that would be generated by these noise sources, acoustical data (i.e., source noise levels) for these items were derived from various sources including manufacturers' specifications sheets, published noise prediction algorithms, and equipment information provided by the project proponent. Table 3.13-6 summarizes the equipment considered in the operational noise analysis, as well as the associated sound power.

[6] According to the community noise and land use compatibility standards utilized by Los Angeles County, noise levels up to 60 dBA CNEL are considered to fall within the normally acceptable noise range for single-family homes.

**Table 3.13-6. Estrella Equipment Noise Levels**

| Equipment Area | Equipment Item | Stated Noise Level | Calculated Sound Power (SWL)[1] | Total Number of Items |
|---|---|---|---|---|
| Substation | 25 MVA Transformer | N/A (SWL estimated from MVA rating) | 94.2 dBA | 5 |
| | Wall-mounted HVAC Unit | 55 dBA @ 50 feet | 86.6 dBA | 5 |
| BESS | Transformer | 60 dBA @ 1 meter | 73.3 dBA | 9 |
| | Inverter | 75 dBA @ 3 meters | 92.5 dBA | 27 |
| | Chiller | 70 dBA @ 1 meter | 79.1 dBA | 272 |
| Equipment Pads | 5.5 MVA Transformer | N/A (SWL estimated from MVA rating) | 86.0 dBA | 8 (1 per pad) |
| | 45 kVA Transformer | N/A (SWL estimated from kVA rating) | 59.9 dBA | 8 (1 per pad) |
| | Inverter | 64.3 dBA @ 10 meters | 92.3 dBA | 16 (2 per pad) |

[1] Sound power, also known as acoustic power, is the total acoustic power radiated by a source in all directions per unit time. Sound power is a physical characteristic of the noise source and is not related to distance.

To analyze noise from on-site operations, a three-dimensional computer noise model was developed using SoundPLAN software. The model considers many important variables, including the sound power of each noise source, the heights of the noise sources and receivers, the distance to noise-sensitive receivers, site topography, barrier effects of structures (buildings, walls, etc.) and terrain (slopes, hills, etc.), and local ground cover conditions. The geometry and terrain for the model was based on the proposed project site layout plans and publicly available mapping, aerial photography, and topographical data (i.e., USGS, OpenStreetMap, Google Earth). The battery container structures were modeled to account for the acoustical shielding that they will provide. Ground conditions were modeled as acoustically "soft" to account for the unpaved nature of the ground between the BESS and the nearest residences, as well as the noise attenuation that will be provided by the many rows of photovoltaic panels that will be located between the BESS and the homes. It was assumed that the substation and BESS equipment would run at 100 percent during the daytime hours of 7:00 a.m. to 7:00 p.m., 75 percent during the evening hours of 7:00 p.m. to 10:00 p.m., and 50 percent during the nighttime hours of 10 p.m. to 7 a.m. It was assumed that the equipment pad equipment distributed throughout the solar arrays would run at 100 percent during the daytime hours of 7:00 a.m. to 7 p.m., 50 percent during the evening hours of 7:00 p.m. to 10:00 p.m., and 0 percent during the nighttime hours of 10:00 p.m. to 7:00 a.m.

Based on the aforementioned modeling parameters for the proposed project's on-site operational noise sources, the noise levels that would be experienced by the nearest sensitive receptors surrounding the project site, which includes single-family residences located in both Los Angeles and Kern County (within the WSSP area), were estimated and assessed against the applicable local noise standards. With respect to Los Angeles County, Chapter 12.08 (Noise Control) of the Los Angeles County Municipal Code has established exterior noise levels for different receptor properties. For residential properties, the County has established an exterior nighttime (i.e., 10:00 p.m. – 7:00 a.m.) and daytime (i.e., 7:00 a.m. – 10:00 p.m.) noise level of 45 dBA $L_{50}$ and 50 dBA $L_{50}$, respectively. With respect to the WSSP area of Kern County, the WSSP also has identified standards regarding the maximum desired ambient noise level for different land uses based on their sensitivity levels. For sensitive uses, which is a category that primarily contains residential uses, the WSSP has established both nighttime and daytime exterior noise levels of 45 dBA $L_{50}$ and 55 dBA $L_{50}$, respectively. These

noise standards from Los Angeles and Kern County are used to evaluate whether potential noise impacts from operation of the proposed project would occur at the nearest surrounding sensitive receptors. The estimated noise levels at these nearest sensitive receptors are shown in Table 3.13-7. The noise level outputs generated from the noise modeling are provided graphically in Appendix G as noise contour maps.

**Table 3.13-7. Estimated Stationary Equipment Noise Levels at Analyzed Sensitive Receptors**

| | | Estimated Average Hourly Noise Level (dBA $L_{eq}$)[1] | | | |
|---|---|---|---|---|---|
| **Receptor[2]** | **County Location** | **Nighttime** | **Exceed Standard?[3]** | **Daytime** | **Exceed Standard?[4]** |
| **SR1** | Kern County (WSSP Area) | < 30 | No | 32 | No |
| **SR2** | Kern County (WSSP Area) | < 30 | No | 38 | No |
| **SR3** | Kern County (WSSP Area) | < 30 | No | 37 | No |
| **SR4** | Kern County (WSSP Area) | 31 | No | 38 | No |
| **SR5** | Los Angeles County | 36 | No | 40 | No |
| **SR6** | Los Angeles County | 33 | No | 38 | No |

[1] It is assumed that the calculated $L_{eq}$ noise levels would occur for at least 30 minutes per hour and, therefore, should be assessed relative to the $L_{50}$ (30 minutes per hour) noise limits of the local standards for both Los Angeles and Kern County.

[2] Receptor locations are depicted in Figure 3.13-2.

[3] For receptors that are located within the WSSP area of Kern County or Los Angeles County, the nighttime noise standard is 45 dBA $L_{50}$ as established under the WSSP and the Los Angeles County Noise Ordinance, respectively.

[4] For receptors that are located within the WSSP area of Kern County, the daytime noise standard is 55 dBA $L_{50}$ as established under the WSSP. For receptors that are located within Los Angeles County, the daytime noise standard is 50 dBA $L_{50}$ as established under the Los Angeles County Noise Ordinance.

As shown in Table 3.13.7, none of the nearest sensitive receptors to the project site that are located in Los Angeles and Kern Counties would be exposed to noise levels that would exceed the applicable exterior noise standards established by these two jurisdictions. As such, sensitive receptors that are located further away from the project site would also not be exposed to noise levels that would exceed the applicable noise standards of Los Angeles and Kern Counties.

Aside from the on-site stationary noise sources, periodic maintenance activities at the project site would also generate noise levels. The main maintenance activity that would generate noticeable noise levels at the project site would be washing of the solar panels, which is anticipated to occur up to two times a year. Noise levels from panel washing would primarily be generated from the use of portable power equipment, such as power washers. However, panel washing for the proposed project would be temporary and would only occur during daytime work hours. The activity at any one particular area within the project site would be relatively brief before the activity moves away to another area. As such, the nearby sensitive receptors to the project site would not be exposed to noise levels for an extended period of time during the panel washing activities. Additionally, based on representative manufacturer specifications that indicate a pressure washer can generate a maximum operational noise level of 82 dBA and assuming a reference distance of one meter, the Los Angeles County daytime

noise standard of 50 dBA $L_{50}$ and the WSSP's daytime noise standard of 55 dBA $L_{50}$ would be exceeded if the pressure washer is operated within distances of approximately 39 and 62 feet, respectively, of the receptor. As the project's solar panels within the project site are located beyond these distances from the nearest surrounding sensitive receptors, the panel washing activities at the project site would not expose these receptors to noise levels that would exceed the applicable exterior noise standards of Los Angeles County or Kern County.

Overall, noise impacts on nearby sensitive receptors as a result of project operations would be less than significant and no mitigation is required.

*Operational Traffic*

The proposed project is not anticipated to have on-site personnel for its daily operations. The only anticipated vehicle trips for project operations would be those associated with maintenance, security activities, and panel washing (up to two times per year depending on annual rainfall). These activities would be performed on an as-needed basis and are not anticipated to exceed 10 visits annually resulting in 20 truck trips total (Chen Ryan 2020). For the purpose of conducting a conservative analysis of the project's operational traffic noise levels, it is assumed that the 20 truck trips would occur on a single day. Based on this daily estimate of truck trips, the project's operational vehicle traffic would generate noise levels of approximately 53 dBA CNEL or less, at 50 feet from the center of the roadway. The trips associated with the proposed project are anticipated to come from the east (via SR-14) and travel west to the distinct sites on West Avenue A. As such, the operational traffic noise levels at sensitive receptors (i.e., residences) located along West Avenue A would not exceed Los Angeles County's average daily noise level of 60 dBA CNEL for single-family residential uses. Thus, impacts related to the project's operational traffic noise would be less than significant and no mitigation is required.

***b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?***

**Less than Significant.** Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground. The effects of groundborne vibrations are typically limited to causing nuisance or annoyance to people, but at extreme vibration levels damage to buildings may also occur. In contrast to airborne sound, groundborne vibration is not a phenomenon that most people experience every day. The ambient groundborne vibration level in residential areas is usually much lower than the threshold of human perception. Most perceptible indoor vibration is caused by sources within buildings, such as mechanical equipment while in operation, people moving, or doors slamming. Typical outdoor sources of perceptible groundborne vibration are heavy construction activity (such as blasting, pile driving, or earthmoving), steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible, even in locations close to major roads. The strength of groundborne vibration from typical environmental sources diminishes (or attenuates) fairly rapidly over distance.

Because vibration can vary markedly over a short period of time, various descriptors have been developed to quantify vibration. One of the most common descriptors used in the analysis of groundborne vibration is peak particle velocity (PPV), which is defined as the maximum instantaneous positive or negative peak amplitude of the vibration velocity. The unit of measurement for PPV is inches per second (in/s). Unlike many quantities used in the study of environmental acoustics, PPV is typically presented using linear values and does not employ a dB scale. Since it is related to the stresses that are experienced by buildings, PPV is generally accepted as the most

appropriate descriptor for evaluating the potential for building damage (both the Federal Transit Administration and California Department of Transportation [Caltrans] guidelines recommend using PPV for this purpose). It is also used in many instances to evaluate the human response to groundborne vibration (Caltrans guidelines recommend using PPV for this purpose). Land uses that would be considered sensitive to human annoyance caused by vibration are generally the same as those that would be sensitive to noise, and would typically include residences, schools, hospitals, assisted living facilities, mental care facilities, places of worship, libraries, performing arts facilities, and hotels and motels.

The proposed solar facility at the project site would not involve the long-term operational use of any equipment or processes that would result in significant levels of groundborne vibration. The on-site stationary equipment operating at the project site consisting of substation transformers, battery storage equipment, axis trackers, and inverters would not impart significant amounts of energy to the ground resulting in groundborne vibration that is perceptible. However, potential impacts associated with groundborne vibration would occur during the project's construction phase when heavy off-road equipment are operating at the project site and along the proposed gen-tie route. The use of these heavy construction equipment would generate groundborne vibration that could affect nearby residential structures or residents. The project site and proposed gen-tie route are located in proximity to sparsely distributed residential dwellings. As such, potential vibration impacts related to building damage and human annoyance are analyzed at these nearby residential dwellings during project construction.

The County of Los Angeles has established a vibration threshold in Section 12.08.560 of its Noise Ordinance, which states:

> Operating or permitting the operation of any device that creates vibration above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way (ROW) is prohibited. The perception threshold shall be a motion velocity of 0.01 inch/second over the range of 1 to 100 Hertz.

However, Los Angeles County's standard is quite conservative because it restricts acceptable vibration to the limit of human perception. While this may represent a reasonable goal for vibration from long-term project operations, it is overly restrictive for vibration from short-term temporary construction activity. The County of Kern has not established any regulatory standards for groundborne vibration. Although no vibration standard that is applicable to construction activities has been established by either Los Angeles or Kern County, Caltrans has produced the widely referenced *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) that specifically addresses potential groundborne vibration impacts from construction. The manual provides guidance for two types of potential impact: (1) damage to structures, and (2) annoyance to people. Guideline criteria for each are provided in Tables 3.13-8 and 3.13-9. For the purpose of this analysis, these guideline criteria published by Caltrans to assess potential structural damage risks and human annoyance resulting from groundborne noise and vibration are used to assess potential impacts during project construction.

**Table 3.13-8. Caltrans Guideline Vibration Damage Criteria**

| | Maximum PPV (in/s) | |
|---|---|---|
| **Structure and Condition** | **Transient Sources** | **Continuous/Frequent Intermittent Sources** |
| Extremely fragile historic buildings, ruins, ancient monuments | 0.12 | 0.08 |
| Fragile buildings | 0.2 | 0.1 |
| Historic and some old buildings | 0.5 | 0.25 |
| Older residential structures | 0.5 | 0.3 |
| New residential structures | 1.0 | 0.5 |
| Modern industrial/commercial buildings | 2.0 | 0.5 |

Source: Caltrans 2020.
Notes:
Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

**Table 3.13-9. Caltrans Guideline Vibration Annoyance Criteria**

| | Maximum PPV (in/s) | |
|---|---|---|
| **Human Response** | **Transient Sources** | **Continuous/Frequent Intermittent Sources** |
| Barely perceptible | 0.04 | 0.01 |
| Distinctly perceptible | 0.25 | 0.04 |
| Strongly perceptible | 0.9 | 0.10 |
| Severe | 2.0 | 0.4 |

Source: Caltrans 2020.
Notes:
Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Data and modeling methodologies provided by Caltrans' guidance manual are also used to estimate the proposed project's construction-related vibration levels. The manual provides typical vibration source levels for various types of construction equipment, as well as methods for estimating the propagation of groundborne vibration over distance. Table 3.13-10 provides the PPV levels of construction equipment expected to be used for the proposed project; the levels are provided for a reference distance of 25 feet. All of the analyzed equipment is classified as continuous/frequent intermittent vibration sources. Additionally, the solar panels at the project site are assumed to be installed using track-mounted post drivers. The PPV level for this equipment was calculated using methods provided in Caltrans' guidance manual and presented in Table 3.13-10.

**Table 3.13-10. Construction Equipment Vibration Levels**

| Equipment Item | Reference PPV at 25 feet, in/s [1] |
|---|---|
| Post driver[2] | 0.161 |
| Large bulldozer[3] | 0.089 |
| Caisson drilling[4] | 0.089 |
| Loaded trucks (on rough terrain) | 0.076 |
| Small bulldozer[5] | 0.003 |

Source: Caltrans 2020.

Notes:

[1] Obtained from Caltrans 2020.

[2] Calculated based on a reference level of 0.65 in/s PPV for a 36,000 foot-pounds (ft-lbs) pile driver and a maximum energy level of 2,200 ft-lbs for post drivers.

[3] Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

[4] Equipment used to represent the ground drilling required to install poles for the project's above-ground gen-tie line.

[5] Considered representative of smaller equipment such as small skid steers and mini excavators.

The following equation from the guidance manual was used to estimate the change in PPV levels over distance:

$$PPV_{rec} = PPV_{ref} \times (25/D)^{n}$$

where $PPV_{rec}$ is the PPV at a receptor; $PPV_{ref}$ is the reference PPV at 25 feet from the equipment; D is the distance from the equipment to the receiver, in feet; and n is a value related to the vibration attenuation rate through ground (the default recommended value for n is 1.1). This equation was used to estimate the PPV at each of the closest vibration-sensitive receivers based on the worst-case (closest) distance between each source and receiver. For the purposes of assessing structural vibration sensitivity, the residential structures located in proximity to the proposed project are considered to be "old buildings," which have an applicable building damage threshold of 0.25 in/s (refer to Table 3.13-8). This is likely to be a conservative assumption but is considered a sensible approach because the construction and condition of the structures have not been inspected or verified.

Based on the vibration levels associated with the types of construction equipment that would be used during project construction (refer to Table 3.13-10), the range of vibration levels that could occur at the analyzed sensitive receptors near the project site and proposed gen-tie route are estimated and shown in Table 3.13-11. The table also compares the calculated PPV with the human perceptibility criteria from Table 3.13-9 in order to assess the potential for human annoyance.

**Table 3.13-11. Estimated Groundborne Vibration from Project Construction**

| Receptor | Range of Estimated PPV, in/s | Worst Case Human Response |
|---|---|---|
| SR1 | <0.001 – 0.002 | None (below barely perceptible) |
| SR2 | <0.001 – 0.013 | Barely perceptible |
| SR3 | <0.001 – 0.020 | Barely perceptible |
| SR4 | <0.001 – 0.017 | Barely perceptible |
| SR5 | <0.001 – 0.017 | Barely perceptible |
| SR6 | <0.001 – 0.022 | Barely perceptible |
| SR7 | <0.001 – 0.001 | None (below barely perceptible) |
| SR8 | <0.001 – 0.003 | None (below barely perceptible) |
| SR9 | <0.001 – 0.005 | None (below barely perceptible) |
| SR10 | <0.001 – 0.016 | Barely perceptible |
| SR11 | <0.001 – 0.010 | Barely perceptible |
| SR12 | <0.001 – 0.003 | None (below barely perceptible) |
| SR13 | <0.001 – 0.001 | None (below barely perceptible) |
| SR14 | <0.001 – 0.015 | Barely perceptible |
| SR15 | <0.001 – 0.017 | Barely perceptible |

As shown Table 3.13-11, the estimated PPV values at all locations are well below the applicable 0.25 in/s threshold for potential building damage and fall within the barely perceptible range or lower. None of the predicted vibration would be distinctly perceptible. Furthermore, construction would not occur during the evening or nighttime hours when residents are typically most sensitive to vibration because they are trying to sleep or rest. Thus, project construction would not expose the analyzed sensitive receptors to or generate excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

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

**Less Than Significant.** The project site is not within 2 miles of a public airport or public use airport as identified in the Los Angeles County Airport Land Use Compatibility Plan (Los Angeles County 1991). The two nearest public use airports to the project site are the Rosamond Skypark and General William J. Fox Airfield located approximately 5.7 miles northeast and 6.2 miles southeast, respectively, of the project site. Additionally, while the project site is approximately 1.5 mile west of the Little Buttes Antique Airfield, this is a private-use airport for mostly small, single-engine aircraft that is served by one dirt runway (City-Data 2021). Given the private use nature of this airport and the small-scale aircraft that use this facility, the project site would not be subject to high levels of aircraft noise from this airport. The proposed project would not create residences or other land uses that would be sensitive to aircraft noise. All project features would be outside the airfield properties. As such, the proposed project would not expose people working in the project area to excessive noise levels resulting from either a public or public use airport or private airstrip, and impacts would be less than significant.

## 3.13.4 Mitigation Measures

**MM NOI-1: Construction Noise Abatement**. The construction contractor(s) shall adhere to the following construction noise abatement and avoidance measures:

- Perform the majority of work during weekdays and daytime hours, or as described in Section 12.08 of the Los Angeles County Code and Chapter 8.36 of the Kern County Code of Ordinances. Limit haul deliveries to the same hours specified for operation of construction equipment.
- Coordinate noisiest construction equipment use, including pile drivers, during times of day when residents are less sensitive to noise. Avoid simultaneous use of noisiest construction equipment, including pile drivers, with other equipment.
- Require modern equipment where feasible and perform inspections and maintenance of vehicles and construction equipment to ensure equipment is in acceptable working order consistent with manufacturers' standards.
- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.
- Place all stationary construction equipment as far as feasible from noise-sensitive receptors and directed away from the noise-sensitive receptors where feasible. Locate equipment staging in areas that will create the greatest distance between staging area noise sources and noise-sensitive receptors during all project construction.
- Restrict idling time of diesel engines on-site to a maximum of 5 minutes.

# 3.14 Population and Housing

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

## 3.14.1 Environmental Setting

The project site is vacant and has no habitable buildings, structures, or development.

## 3.14.2 Project Impacts

***a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

**Less Than Significant Impact.** The proposed project would not induce substantial population growth. It does not propose any housing or commercial development, nor does it propose any significant extension of roads or infrastructure. No change in the County's population or housing would occur with proposed project implementation. Construction jobs would be short term and are expected to be filled mostly by the existing workforce and sourced from the surrounding communities. During operations, the proposed project would typically be unmanned, apart from periodic on-site personnel visitations for security, maintenance, and system monitoring. These intermittent site visits would not create any permanent or substantial demand for housing, goods, or services in the area and would not induce substantial population growth in the County or surrounding communities. Therefore, impacts to population growth would be less than significant.

***b. Would the project displace substantial numbers of existing people or housing, especially affordable housing, necessitating the construction of replacement housing elsewhere?***

**No Impact.** The proposed project does not propose any housing or commercial development, nor does it propose any significant extension of roads or infrastructure. No change in the County population or housing would occur with proposed project implementation. Therefore, the proposed project would not materially affect local or regional population.

## 3.14.3 Mitigation Measures

Proposed project implementation would not result in significant impacts related to population or housing. Therefore, no mitigation is required.

# 3.15 Public Services

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| a. | Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| i. | Fire protection? | ☐ | ☐ | ☒ | ☐ |
| ii. | Police protection? | ☐ | ☐ | ☒ | ☐ |
| iii. | Schools? | ☐ | ☐ | ☐ | ☒ |
| iv. | Parks? | ☐ | ☐ | ☐ | ☒ |
| v. | Libraries? | ☐ | ☐ | ☐ | ☒ |
| vi. | Other public facilities? | ☐ | ☐ | ☐ | ☒ |

## 3.15.1 Environmental Setting

The nearest County fire station to the project site is Fire Station 112, located at 8812 West Avenue E-8, in the City of Lancaster, which is approximately 4.5 miles south of the project site (LACFD 2020). Police protection services for the project site are provided by the Los Angeles County Sheriff's Department (LACSD) located at 501 West Lancaster Boulevard, in the City of Lancaster (LACSD 2020).

## 3.15.2 Project Impacts

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

***i. Fire protection?***

**Less Than Significant Impact.** The project would not involve the creation of new habitable structures or new population growth that could generate increased demand for fire protection services. The project has the potential to require fire protection services in the event that any of the equipment or landscaping were to catch fire. During construction, there would be workers, machinery, construction supplies, and hazardous materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, and other petroleum-based products contained in construction vehicles on site. There is a possibility that construction activities could accidentally ignite a fire that could require assistance from the LACFD. The nearest fire station (County Fire Station 112) is located approximately 4.5 miles south of the project site, and no new or physically altered fire protection facilities would be required to provide fire protection services. Therefore, no impacts would result.

The project would prepare a CUP Site Plan that would be submitted for review and approval by the LACFD Fire Prevention Division, Land Development Unit for access and water requirements. To safeguard against fire hazards created by the project, building plans would be subject to review and

approval by the LACFD; annual inspections of the premises for compliance and to correct conditions which may cause fire or contribute to its spread would also be required. Compliance with these regulations would ensure that project impacts would remain less than significant.

***ii. Police protection?***

**Less Than Significant Impact.** The project would not lead to an increase in residential populations at the project site or in nearby communities, and thus would not change the officer-to-population ratio for the area. Operation of the project is largely unmanned and would require limited LASD protection services. The proposed solar facilities would be surrounded by a 8-foot-tall fence with an additional 1–2 feet of three-string barbed wire to prevent unauthorized access or trespassing. Perimeter, motion-activated fence lighting may be installed to provide nighttime security of the solar facility. Patrol services around the solar facility are expected to continue to be provided by the LASD personnel. Therefore, construction and operations of the project would have a less than significant impact on sheriff protection services and their staffing or response times.

***iii. Schools?***

**No Impact.** The project would not include the development of housing units, nor would it induce population growth. Thus, no impact on capacities, service levels, or performance objectives for schools would be generated by the project. Therefore, no impact would occur.

***iv. Parks?***

**No Impact.** The project would not include the development of housing units, nor would it induce population growth. Thus, no impact on capacities, service levels, or performance objectives for parks would be generated by the project. Therefore, no impact would occur.

***v. Libraries?***

**No Impact.** The project will not include the development of housing units, nor will it induce population growth. Thus, no impact on capacities, service levels, or performance objectives for libraries will be generated by the project. Therefore, no impact will occur.

***vi. Other public facilities?***

**No Impact.** No impact on capacities, service levels, or performance objectives for other public facilities would be generated by the project. Therefore, no impact would occur.

## 3.15.3 Mitigation Measures

Project implementation would not result in significant impacts related to public services. Therefore, no mitigation is required.

# 3.16 Recreation

| | | Potentially Significant Impact | Less Than Significant Impact with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| a. | Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b. | Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |
| c. | Would the project interfere with regional trail connectivity? | ☐ | ☐ | ☐ | ☒ |

## 3.16.1 Environmental Setting

The project site and surrounding areas are not used for recreational purposes. Land uses surrounding the project site include undeveloped land with varying degrees of disturbance due to previous or existing agricultural activities and residential lots. Land adjacent to the project is also former farmland that is currently undeveloped. While some of these areas are open space, they do not currently support any recreational activities.

## 3.16.2 Project Impacts

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

**No Impact.** The project would not directly or indirectly result in housing development or population growth on the project site or in the surrounding communities. With no new households or residents, the project would not increase the demand or use of local parks or regional recreational facilities. Therefore, the project would have no impact on existing parks or create a need for new neighborhood or regional parks.

***b. Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment?***

**No Impact.** See discussion above. The project would not create a need for new neighborhood or regional parks. There would be no impacts.

***c. Would the project interfere with regional trail connectivity?***

**No Impact.** The project site is private property and does not contribute to recreational connectivity. While the project will reduce the amount of connected open space by fencing off the project site, due

to the vast amount of surrounding open space, the project will not interfere with regional recreational connectivity. Therefore, there will be no impact.

## 3.16.3 Mitigation Measures

Project implementation would not result in significant impacts related to recreation. Therefore, no mitigation is required.

# 3.17 Transportation

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

## 3.17.1 Environmental Setting

The project is approximately 50 miles north of downtown Los Angeles. Regional access to the project site is provided by the Antelope Valley Freeway (California State Route [SR] 14), exiting at Avenue A, then proceeding west. (see Figure 2-3, Local Vicinity).

The project site is located southwest of the intersection of West Avenue A and 90th Street West in unincorporated Los Angeles County, California. Regional access to the project site is provided via the Antelope Valley Freeway (SR-14) from the east or SR 138 from the south (see Figure 2-2, Project Location). SR-14, which runs in a north-south direction, is located approximately 7 miles west of the project site. SR 138 is an undivided two-lane highway corridor that extends approximately 36.0 miles in an east-west direction between Interstate 5 and SR-14, and is located 2.5 miles north of the project site.

It is likely vehicle and equipment delivery to the site would come from SR-14, traveling west on West Avenue A until it meets with 90th Street West. The County designates SR-14 as a Freeway, the highest level of roadway in the planning area, which accommodates regional and interstate travel (LACDRP 2015a). Freeways typically have a minimum 180-foot cross-section and at least four through lanes (two per direction). Freeways have limited access at interchanges and have a typical design capacity of over 2,000 vehicles per hour per lane. Both the Antelope Valley Area Plan and County Highway Plan Policy Map identify 90th Street West as an Existing Major Highway.

As previously mentioned, 90th Street West is designated as an Existing Major Highway by LACDRP. The County classifies major highways as roadways intended to accommodate the majority of traffic connecting between cities and communities in the region and the regional freeway system, including key inter-urban roads, non-urban access ways, and recreational roads (LACDRP 2015b). Trip generation for employees and delivery trucks would vary depending on the phase of construction of the project.

## 3.17.2 Project Impacts

***a. Would the project conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?***

**Less than Significant Impact.** Trip generation for employees and delivery trucks would vary depending on the phase of construction of the project. The construction activities are expected to be completed in approximately 11 months. Construction would generally occur during daylight hours, Monday through Friday. Weekend and non-daylight work hours may be necessary to make up schedule deficiencies, or to complete critical construction activities. Construction activities would be conducted consistent with the County noise regulations regarding hours of construction. Construction workers, equipment delivery, and water trucks would regionally access the site from SR-14, West Avenue A, and 90th Street West. Construction equipment, vehicles, and materials would all be staged within the project site. This limited amount of construction activity is not expected to cause traffic congestion on area roadways and intersections.

The community surrounding the project area is rural with undeveloped land and few residences. 90th Street West is a Secondary Disaster Route for the County of Los Angeles (County of Los Angeles 2012). The proposed construction would be staged on-site and would have a short-term impact on circulation. The project would not result in any closures of existing roadways that might have an effect on emergency response or evacuation plans in the vicinity of the project site. Accordingly, implementation of the project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

The proposed project and associated features would not be located within a public right-of-way and would not interfere with any trails or bikeways.

Upon commissioning, the project would enter the operational phase. For the duration of the operational phase, the project would be operated on an unstaffed basis and monitored remotely, with regular on-site personnel visitations for security, maintenance, and system monitoring. Therefore, the operations phase of the project would result in negligible trips and would have a less than significant impact on traffic and circulation, and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for performance of the circulation system.

If it is determined that solar energy generation uses shall no longer continue, AES would decommission and remove the system and its components at the end of the life of the project (approximately 35 years) if deemed necessary. The project site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, State, and County regulations.

***b. Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?***

**Less than Significant Impact.** A VMT Analysis Technical Memorandum was prepared, which evaluated the proposed project against the screening criteria identified in the Los Angeles County Public Works Transportation Impact Analysis (TIA) Guidelines dated July 23, 2020 (Chen Ryan 2020a, Appendix H).

The Proposed Project is not anticipated to have on-site personnel. The only trips associated with the Proposed Project are not anticipated to exceed 20 truck trips annually. Therefore, the Proposed Project is not anticipated to create a daily increase in population or visitors within the area.

The Los Angeles County Public Works Transportation Impact Analysis (TIA) Guidelines dated July 23, 2020 are consistent with the California Environmental Quality Act (CEQA) guidelines and provides significance determination thresholds for VMT and VMT analysis methodology for land use and transportation projects. Based on these guidelines, all projects requiring CEQA review shall go through a screening process to determine the level of transportation analysis that is required.

Based on the screening criteria identified in the TIA guidelines, projects that can be classified within certain screening criteria would be presumed to have a less than significant VMT impact due to the project's characteristics and/or location and therefore would not require additional VMT CEQA analysis. The proposed project falls within the "Non-Retail Project Trip Generation Screening Criteria" since the Proposed Project would not generate more than 110 daily vehicle trips. Therefore, further VMT analysis is not required and the Proposed Project can be assumed to have a less-than-significant VMT impact.

While trip generation during construction would result in increased Vehicle Miles Traveled (VMT), construction-related traffic would be minimal and temporary. During operations, the proposed project would typically be unmanned, apart from periodic on-site personnel visitations for security, maintenance, and system monitoring. These intermittent site visits would not result in a significant increase in VMT. As such, impacts are anticipated to be less than significant.

***c. Would the project substantially increase hazards to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

**Less than Significant Impact.** The project does not include the realignment of any existing road facilities. Construction staging and lay-down areas would be located within the project site boundaries and would not create a potential traffic hazard on public rights-of-way. The project would contain one access point along 90th Street West, with one 50-foot wide gate. The driveway would provide access for emergency vehicles and for maintenance and operation purposes. A network of 20-foot-wide access roads would also be provided around the perimeter and throughout the project site in compliance with applicable LACFD design requirements.

An Access Management Analysis was prepared, which evaluated whether a left-turn lane or a right-turn lane would be required to access the proposed project site (Chen Ryan 2020b, Appendix H). The study was conducted in accordance with the County of Los Angeles – Access Management for Private Development Guidelines, May 2011. These guidelines serve as a standardized approach for the design of access points intended to prevent traffic delays and conflicts among roadway users. Since the project site is rurally located and no major developments exist along West 90th Street, within the vicinity of the proposed project, the project driveway exceeds the minimum stopping sight distances required for approaching traffic. Additionally, the anticipated traffic volumes during both the AM and PM peak hours at the proposed driveway do not warrant the implementation of turn lanes. Therefore, installation of turn lanes would not be required at the proposed project driveway and the proposed project would not increase traffic hazards.

A Decommissioning Plan for the project would be prepared and submitted to the County for approval prior to the issuance of a grading permit. This Decommissioning Plan would ensure that the project site is returned to a beneficial use upon termination of the proposed solar energy generation uses if

required. It is assumed that decommissioning of the project site would require the same construction scenario (e.g., activities, equipment, duration) as the initial development of the project site. It is expected that future decommissioning activities would also be expected to comply with the same or equivalent traffic control mitigation requirements. Therefore, future traffic impacts related to decommissioning would be less than significant.

***d. Would the project result in inadequate emergency access?***

**Less than Significant Impact.** 90th Street West is a Secondary Disaster Route for the County of Los Angeles, as shown on the Los Angeles County Department of Public Works (LACDPW) map, *Disaster Routes with Road Districts, North Los Angeles County* (LACDPW 2012). The proposed construction would be staged on-site and would have a short-term impact on circulation. The project would not result in any closures of existing roadways that might have an effect on emergency response or evacuation plans in the vicinity of the project site. Accordingly, implementation of the project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Construction of the solar installation and on-site infrastructure would not require any roadway or lane closures during either construction or operation that could restrict or impede emergency access. As depicted on Figure 2-9, Site Plan, the project would contain one access point along 90th Street West, with one 50-foot wide gate. The driveway would provide access for emergency vehicles and for maintenance and operation purposes. Two 5,000-gallon water tanks would be sited near each of the two driveways, which would be clearly labeled for "Fire Department Use Only." A network of 20-foot-wide access roads would also be provided around the perimeter and throughout the project site in compliance with applicable LACFD design requirements. The internal access roads would be installed according to the County Code prior to operating the facilities and would be maintained in a drivable condition throughout the operation of the project to allow for emergency access. Therefore, impacts to emergency access would be less than significant.

## 3.17.3 Mitigation Measures

Project implementation would not result in significant impacts related to transportation. Therefore, no mitigation is required.

# 3.18 Tribal Cultural Resources

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

## 3.18.1 Environmental Setting

A CRA consisting of a cultural resources records search, additional research, reconnaissance-level pedestrian field survey, Native American Heritage Commission (NAHC) Sacred Lands File Search, and vertebrate paleontological resources overview was conducted for the proposed project (BCR 2020). The findings of the CRA specific to tribal cultural resources are detailed in this section.

A Native American consultation in accordance with AB 52 was conducted for the proposed project. The NAHC requested a Sacred Lands File search and Native American contact list was acquired. A response was received from the NAHC on March 26, 2020, stating that a records search of the NAHC Sacred Lands inventory failed to indicate the presence of Native American cultural resources on the project site. In addition, the NAHC provided a list of Native American groups and individuals that may have knowledge of the religious and/or cultural significance of resources that may be on and near the project site. On 10/28/20 and 12/4/20, the County of Los Angeles contacted two of the tribes identified in this list, the San Gabriel Band of Mission Indians (Gabrieleno Band) and the Serrano Historical Tribal Territory (San Manuel Band of Mission Indians). No responses were received, and consultation was closed on 1/4/21. On May 11, 2021 the SMBMI provided post-consultation comments on the project stating SMBMI does not have any concerns with the project's implementation, as planned, at this time due to the nature and location of the proposed project, and given the Cultural Resources Management Department's present state of knowledge. SMBMI did request specific language be made a part of the project/permit/plan conditions, which have been incorporated into **MM CUL-1**, **MM CUL-2**, **MM CUL-3**, **MM TCR-1**, and **MM TCR-2**.

The Legislature added requirements regarding tribal cultural resources for CEQA in Assembly Bill 52 (AB 52) that took effect July 1, 2015. AB 52 requires consultation with California Native American tribes and consideration of tribal cultural resources in the CEQA process. By including tribal cultural

resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. AB52 consultation would be performed by the County of Los Angeles.

## 3.18.2 Project Impacts

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

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

**Less Than Significant Impact with Mitigation.** As previously mentioned, an NAHC search of the Sacred Lands File did not indicate the presence of Native American cultural resources on the project site, and no significant archaeological deposits were found during the records search and field survey. Although the likelihood of encountering archaeological resources on the project site is considered low, ground-disturbing activities have the potential to reveal buried deposits not observed on the surface. Therefore, implementation of MM CUL-1, MM CUL-2, and MM CUL-3 (provided in Section 3.5) which describe procedures to be followed in the event that historical resources including tribal cultural resources are discovered, would reduce this potentially significant impact to less than significant.

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

**Less Than Significant Impact with Mitigation.** The project would not result in a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074, since no tribal cultural resources were identified within or immediately adjacent to the project site, and the likelihood of discovering in-place resources is low due to historical land disturbance activities. As discussed above, an NAHC search of the Sacred Lands File did not indicate the presence of Native American cultural resources on the project site or within the immediate vicinity, and no significant archaeological deposits were found during the records search and field survey. However, minimal grading and ground disturbance for the project would occur; as such, MM CUL-1, MM CUL-2, and MM CUL-3 would include procedures to follow should such unknown resources be encountered during construction activities.

## 3.18.3 Mitigation Measures

**MM CUL-1**, **MM CUL-2**, and **MM CUL-3**, as described in Section 3.5, will be incorporated into project construction and will reduce potentially significant impacts to tribal cultural resources to less than significant.

Additionally, the following mitigation measures will be implemented:

**MM TCR-1:** The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed in CR-1, of any pre-contact and/or historic-era cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site.

**MM TCR-2:** Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to SMBMI. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI throughout the life of the project.

# 3.19 Utilities and Service Systems

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

## 3.19.1 Environmental Setting

The project is in the Antelope Valley, which is underlain by the Antelope Valley Groundwater Basin (Basin). The Basin is located in the western Mojave Desert. The Basin (California Department of Water Resources [DWR] Basin No. 6-44) encompasses 1,580 square miles in Los Angeles, Kern, and San Bernardino Counties. Approximately two-thirds of the Basin lies in Los Angeles County, with small portions extending into San Bernardino County, and the remainder in southeastern Kern County (Antelope Valley Watermaster 2017). As mentioned above, the project site is undeveloped. There are no water, sewer, or solid waste disposal services at the project site. The project site also does not generate solid waste requiring collection and disposal. The project site is located outside the service boundaries of the Los Angeles County Waterworks District No. 40 (Los Angeles County Waterworks Districts 2005).

## 3.19.2 Project Impacts

***a. 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 of which could cause significant environmental effects?***

**Less Than Significant Impact.** The estimate of water usage for the project site is approximately 53 acre- feet of water during the construction phase and approximately 1.02 acre-feet annually for PV module washing and landscape irrigation. As required by the County, all water would be trucked to the project site from available commercial water sources acceptable to the County. The primary source of proposed project water supply would be imported surface water or groundwater from a local water wholesaler, AVEK (ICF 2020). Based on the WSA evaluation, adequate water supplies for the construction and operations and maintenance demand are available under normal water year conditions. No water services or connections to existing facilities are required by the project. There would be no demand for potable water as there would be no habitable structures on-site. The project would not require or result in the relocation or construction of new or expanded water facilities and impacts would be less than significant.

The project would not generate domestic wastewater because no habitable structures, restrooms, bathrooms, toilets, or kitchen facilities would be constructed. The project would provide a mobile sanitation facility for workers during the construction and operations and maintenance periods. Although no significant impacts would result from the use of mobile sanitation facilities, the County Department of Public Health requires the preparation of a mobile sanitation facility plan for sites with no permanent facilities. The mobile sanitation facility would be maintained in a safe and sanitary condition, so as not to constitute a public hazard or nuisance, and would be consistent with the Department of Public Health's "Sanitation Facilities at Remote Worksite Locations." During operations, the mobile sanitation facility would be provided on-site whenever activities are scheduled to take place. Domestic wastewater generated by the mobile sanitation facility would be treated using existing facilities per County regulations. Therefore, no wastewater treatment is required that may exceed Regional Water Quality Control Board (RWQCB) standards, and the project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities. Impacts would be less than significant.

The project would not require natural gas or propane; however, it would use minor amounts of electricity for construction and ongoing maintenance operations during the life of the project. For construction activities, electrical power is expected to be obtained from an on-site generator. Operation of the approved project would require electricity for ongoing maintenance operations, lighting, security systems, and other various operational needs. During daylight hours, the electricity needs for the approved project would be supplied by the project's electricity generation. During non-daylight hours, the electricity needs for the approved project would be provided by backfeed from the BESS, electrical grid, through a gen-tie line, or through the existing SCE lines. The project would not require or result in the relocation or construction of new or expanded electric power or natural gas facilities, therefore impacts would be less than significant.

The project would not require or result in the relocation or construction of new or expanded telecommunications facilities, therefore there would be no impact.

***b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?***

**Less Than Significant Impact.** The estimate of water usage for the project site is approximately 53 acre-feet of water during the construction phase and approximately 1.02 acre-feet annually for PV module washing and landscape irrigation. As required by the County, all water would be trucked to the project site from available commercial water sources acceptable to the County.

Due to concerns on overdrafting the Basin, the County requires that the applicant obtain a "will-serve" letter from a water source acceptable to the County, such as: (a) through the District and/or LACWD for water; (b) through a negotiated program between the AVEK and the District; (c) purchasing a new permanent water supply, or contracting with a water bank outside the Basin for the project and transferring those supplies to the AVEK and the District for use in connection with the project; (d) purchasing potable or non-potable water from the City of Lancaster, City of Palmdale, or other city, public agency, public entity, district, or public or private water purveyor authorized to sell water to the project; (e) on-site wells (to the extent permitted); or (f) any other source acceptable to the County. The applicant, prior to CUP approval, would obtain a "would serve" letter for LACWD's water from the District for the project or other water source acceptable to the County. Compliance with these requirements would prevent increased groundwater pumping within the Basin and avoid the need for a permanent demand for water at the project site. Therefore, impacts would be less than significant.

As previously mentioned, the project would require minimal water supply during construction activities and for the washing of the PV panels during long-term maintenance. PV panels would require cleaning zero to two times per year to remove dust buildup, grime, bird droppings, and/or soot, typically (but not exclusively) with demineralized water. In addition, outside of the security fence, the project site would be surrounded by an approximately 10-foot-wide landscaping buffer along the 90th Street West and West Avenue A frontages. As proposed by the project, disturbed areas of the project site would be re-vegetated after construction with a drought-tolerant native or non-native seed-mix to stabilize the project site and promote revegetation. All shrubs would be manually irrigated via water trucks three times a week for a 90-day maintenance period until the landscaping is established. No long-term irrigation infrastructure is proposed; however, the landscaping would be maintained as needed during the life of the project and would be monitored monthly.

***c. Would the project 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?***

**Less Than Significant Impact.** No wastewater services or connections to existing facilities are required by the project. There would be no generation of wastewater as there would be no habitable structures on-site. Minor amounts of domestic wastewater would be generated by the mobile sanitation facility during construction and operations. The wastewater would be treated using existing facilities per County regulations, impacts to wastewater system capacity would be less than significant.

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

**Less Than Significant Impact.** The proposed project would result in the generation of minor amounts of construction waste, which would require disposal at the Lancaster Landfill. During construction, soil waste would be screened and separated for use as backfill to the maximum extent possible. Other waste debris generated during construction (bolts, packing waste, damaged photo-voltaic panels) would be hauled offsite for recycling when possible. On January 4, 2005, the County adopted an ordinance, that requires at least 50 percent of all debris generated by C&D projects located in unincorporated areas of Los Angeles County to be recycled or reused. The ordinance amends Title 20 of the County Code by adding Chapter 20.87 (Construction and Demolition Debris Recycling and

Reuse), which requires all construction projects to recycle or reuse a portion of all construction and demolition debris, soil, rock, and gravel removed from a project site unless a lower percentage is approved by the Director of the County Department of Public Works (LACDPW). On January 1, 2017, Los Angeles County Public Works begins to enforce the following C&D diversion requirements in accordance with the 2016 CalGreen Manual: all projects that generate C&D debris are to recycle or reuse the C&D debris at a minimum rate of 65 percent, all Universal Waste recovered from a nonresidential project site must be disposed of properly, and all trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled (LACDPW 2020). The project shall comply with the standards that are in effect at the time of the permit issuance. All waste generated during construction of the project would be handled and disposed of in compliance with all applicable federal, State, and local statutes and regulations related to solid waste.

Solid waste generated by employees and other on-site activities during long-term project activities (i.e., panel cleaning and vegetation management) would be minimal. The long-term solid waste stream would not be large enough to require any measurable landfill capacity. The proposed project would comply with federal, state and local statutes on the regulation of solid waste disposal and participate in available solar industry recycling programs. Impacts would be limited and temporary during construction and are considered less than significant.

***e. Would the project comply with federal, state, and local statutes and regulations related to solid waste?***

**Less Than Significant Impact.** The proposed project would comply with federal, state and local statutes and regulations governing solid waste disposal during construction, operation, and decommissioning. Therefore, impacts would be less than significant.

## 3.19.3 Mitigation Measures

Project implementation would not result in significant impacts related to utilities and service systems. Therefore, no mitigation is required.

# 3.20 Wildfire

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

## 3.20.1 Environmental Setting

The project site is not located in State or Local Responsibility areas designated as Very High or High Fire Hazard Severity Zones (CAL FIRE 2007, 2007a). However, the project site and surrounding area primarily consists of open space with annual grasslands, which remain dry for most of the year and have the potential to burn. The project site is relatively flat with an approximately 0-2 percent slope.

## 3.20.2 Project Impacts

***a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?***

**No Impact.** 90th Street West is a Secondary Disaster Route for the County of Los Angeles (Los Angeles County 2012). The proposed construction would be staged on-site and would have a short-term impact on circulation. The project would not result in any closures of existing roadways that might have an effect on emergency response or evacuation plans in the vicinity of the project site. Accordingly, implementation of the project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

***b. 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?***

**Less Than Significant Impact.** The project site and surrounding area primarily consists of open space with annual grasslands, which remain dry for most of the year and have the potential to burn. The introduction of general human activity, including maintenance workers or the driving of combustion engine vehicles, increases the potential risk for dangerous fire hazard. Construction activities, such as welding during installation of PV panels and support structures, could also potentially result in the combustion of native materials.

The project would be required to comply with the County Code's Title 32, Fire Code, which includes various requirements for fire safety and prevention. In compliance with Title 32, vegetation be trimmed to a maximum height of 6 inches within the project site boundaries and cleared to mineral soil for a distance of 50 feet around all electrical transformer vaults or structures. As the project is located in an undeveloped area, there are no fire hydrants or other piped water supplies to the project site. The project would include a network of internal access roads, which would provide emergency access to remote portions of the project site, as well as water tank(s) with a total minimum capacity of 10,000 gallons for use by the LACFD for fire control. Compliance with the County's Fire Code would ensure that impacts related to fire control would be less than significant.

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

**Less Than Significant Impact.** The proposed project would not require the installation or maintenance of new roads or fuel breaks. In accordance with LACFD regulations, the project would include a network of internal access roads, which would provide emergency access to remote portions of the project site, as well two water tanks with a total minimum capacity of 10,000 gallons.

Most fires in the desert are caused by lightning or vehicles. The installation of internal maintenance roads would not be placed within a high fire hazard zone, and the vegetation would be cleared; therefore, the proposed project would not result in increased fire risks that could result in temporary or ongoing impacts to the environment.

***d. Would the project expose people or structure to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?***

**Less Than Significant Impact.** The project site is relatively flat, with an approximately 10-foot change in elevation (0-2 percent slope) and the project site is not located within a 100-year floodplain (FEMA 2008). AES would provide post-construction storm water management with a variety of LID BMPs provided by the County LID Standards Manual that capture and treat post-construction storm water runoff. The proposed project is not anticipated to expose people or structure to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant.

***e. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***

**Less Than Significant Impact.** As discussed in Section 3.9, the project will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Impacts will be less than significant.

## 3.20.3 Mitigation Measures

Project implementation would not result in significant impacts related to wildfire. Therefore, no mitigation is required.

# 3.21 Mandatory Findings of Significance

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

### 3.21.1.1 Affected Environment

The project site is a fallow agricultural field and does not generate any environmental impacts aside from nuisance dust during high winds.

### 3.21.1.2 Discussion

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

**Less Than Significant Impact with Mitigation.** As discussed above in Sections 3.4, 3.5, and 3.7, impacts on biological, cultural, and paleontological resources would be less than significant with mitigation. Regarding biological resources, the implementation of MM BIO-1 through MM BIO-8 would reduce impacts to wildlife. Based on the lack of suitable habitat, no special-status plant species have potential to occur within the study area. No cultural resources (including historic-period or prehistoric archaeological sites, or historic-period architectural resources) were identified on the project site and the implementation of MM CUL-1, MM CUL-2, MM CUL-3, MM TCR-1, and MM TCR-2 which outline procedures to be followed in the event of an inadvertent discovery of cultural resources, would reduce impacts to less than significant. There are no known fossil localities within the project

site or within a 1-mile radius and the implementation of MM GEO-1, the development of a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) by a qualified paleontologist if construction excavation depth is below six feet or more below current grade, would ensure impacts are less than significant level. As a result, the proposed project would not degrade the quality of the environment, including causing a substantial reduction of fish or wildlife habitat, reduction of rare or endangered plant or animal species, or elimination of important examples of the major periods of California history or prehistory. Impacts would be less than significant with mitigation.

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

**Less Than Significant Impact with Mitigation.** Cumulative impacts are an evaluation of the proposed project potential impact combined with other related projects impacts. Related projects are projects that are within the area surrounding the proposed project site that are recently developed, currently in progress or proposed for the future that, when considered with the proposed project, could potentially result in cumulative environmental impacts. There are four related solar projects within 2 miles of the proposed project and gen-tie line: Antelope Expansion 1B, Luna Storage, Lancaster Area Battery Storage, and Big Sky Substation Expansion.

Based on this assessment, this IS/MND concluded that potential impacts to aesthetics, agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, noise, and tribal cultural resources could be reduced to less than significant after mitigation measures are incorporated, when the project was considered in conjunction with these cumulative projects. All other issue areas will not result in a significant cumulative impact or require mitigation when the project was considered in conjunction with these cumulative projects. Therefore, the proposed project when combined with any potential future projects in the project vicinity would not result in impacts that are individually limited, but cumulatively considerable. Consequently, impacts would be less than significant with mitigation.

***c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?***

**Less Than Significant Impact with Mitigation.** As demonstrated in the analysis in this document, construction and operation does not have the potential to generate significant adverse impacts on human beings and no mitigation will be required for the topical issues related to human health, including hydrology and water quality or transportation and traffic. However, a mitigation measure is required for potential impacts on human health associated with air quality (MM AQ-1). As such, the effects on human beings as a result of the proposed project would be less than significant with mitigation.

# Chapter 4
# References

All references to federal, state, and local regulation are available on the Internet. For federal regulations, refer to http://www4.law.cornell.edu/uscode/. For state regulations, refer to www.leginfo.ca.gov. For County of Los Angeles regulations, refer to www.amlegal.com. For Kern County regulations, refer to https://library.municode.com. All other references are available upon request.

## 4.1 Chapter 2, Environmental Setting and Project Description


Antelope Valley Air Quality Management District. 2005. *Rule 403*. Available at: https://avaqmd.ca.gov/files/14c64d1ae/AV403.pdf.

ICF. 2020. *Water Supply Assessment, Estrella Solar Project.* October.

Kern County. 2020. *Interactive GIS Map*. Available at: https://maps.kerncounty.com/H5/index.html?viewer=KCPublic.

Los Angeles County Department of Regional Planning. 2015. *Antelope Valley Area Plan, Town and Country*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_map2-1-west-20150601.pdf.

_____. 2015a. *Antelope Valley Area Plan, Table L-1: Land Use Legend*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_draft-20150601.pdf.

_____. 2016. Los Angeles County Master Plan of Highways – North Half map.

_____. 2020. *Z-Net Interactive Map*. Available at: https://lacounty.maps.arcgis.com/apps/webappviewer/index.html?id=7700eea9d54d46b18efb615f86cba25c.

Southern California Edison. 2020. *Power Site Search Tool Interactive Map*. Available at: https://www.arcgis.com/apps/webappviewer/index.html?id=05a84ec9d19f43ac93b451939c330888.


## 4.2 Chapter 3, California Environmental Quality Act Checklist

### 4.2.1 3.1 Aesthetics


California Department of Transportation. 2020. *California Scenic Highways Online Map*. Available at: https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a.

City of Lancaster. 2009. *General Plan 2030 Master Environmental Assessment*. Available at: http://www.cityoflancasterca.org/Modules/ShowDocument.aspx?documentid=11352.

Los Angeles County Department of Regional Planning. 2015. *Antelope Valley Area Plan, Town and Country*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_draft-20150601.pdf.

_____. 2015. *Los Angeles County General Plan 2035 – October 2015, Figure 9.7*. Adopted. Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_2017-FIG_9-7_scenic_highways.pdf.

Pacific Crest Trail Experience Association. 2021. Map, Available at: https://www.pcta.org/discover-thetrail/maps/.

## 4.2.2 3.2 Agriculture and Forest Resources

Antelope Valley Watermaster. 2019. *Final Antelope Valley Watermaster 2018 Annual Report*. Available at: https://avwatermaster.net/wp-content/uploads/2019/07/190729-2018-Annual-Report-FINAL-Reduced.pdf.

California Department of Conservation. 2017. *The Williamson Act Status Report*. Available at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2018%20WA%20Status%20Report.pdf.

_____. 2020. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/.

_____. 2020a. *Important Farmland Categories*. Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx.

Los Angeles County Department of Regional Planning. 2015a. *Los Angeles County General Plan 2035 – October 2015*, *Figure 9.5*. Adopted. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_hwy_plan_AV.pdf.

_____. 2015. *Antelope Valley Area Plan, Town and Country*, *Map 4-3*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_map4-3-20150601.pdf

_____. 2020. *GIS-NET Public Interactive Map, Planning and Zoning Information for Unincorporated L.A. County*. Available at: http://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public.

Robert Brumfield, Attorney at Law. 2019. *Water Rights for Antelope Valley Property formerly Owned by Mark and Dana Ritter; APN's 3262-006-003 and 3262-006-002 located near Lancaster, California*.

sPower. October 28, 2020. *Email, 10/21/20 Follow-up on Estrella Solar*.

Terracon Consultants. April 17, 2020. *Phase I Environmental Site Assessment, Estrella Solar*.

## 4.2.3 3.3 Air Quality

Antelope Valley Air Quality Management District. 2005. *Rule 403*. Available at: https://avaqmd.ca.gov/files/14c64d1ae/AV403.pdf.

_____. 2016. *California Environmental Quality Act and Federal Conformity Guidelines*. Available at: https://avaqmd.ca.gov/files/e5b34d385/AV%20CEQA%20Guides%202016.pdf.

_____. 2017. *Federal 75 ppb Ozone Attainment Plan – Western Mojave Desert Non-Attainment Area*. Available at: https://avaqmd.ca.gov/files/de07ac191/AVAQMD+2016+75ppb+Final+Ozone+Attainment+Plan.pdf.

California Air Resources Board. 2017. Emission Factors (EMFAC) model v1.0.2. Available: https://www.arb.ca.gov/emfac/2017/.

_____. 2018. *Maps of State and Federal Area Designations*. Available at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

Los Angeles County Department of Public Health. 2018. *Frequently Asked Questions (FAQ) – Valley Fever (Coccidioidomycosis)*. Available at: http://publichealth.lacounty.gov/hea/library/topics/valleyfever/CDCP-ACDC-0037-01.pdf.

Office of Environmental Health Hazard Assessments (OEHHA). 2015. Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments. February. Available: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

South Coast Air Quality Management District (SCAQMD). 2019. South Coast AQMD Air Quality Significance Thresholds. April. Available: https://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.

Trinity Consultants. 2017. *California Emissions Estimator Model User's Guide* Version 2016.3.2. November.

United States Environmental Protection Agency (USEPA). 2006. AP-42: Compilation of Air Emissions Factors, Section 13.2.2, *Unpaved Roads*. November. Available: https://www.epa.gov/sites/production/files/2020-10/documents/13.2.2_unpaved_roads.pdf.

## 4.2.4 3.4 Biological Resources

California Fish and Game Commission. 2020. *Notice of Findings Western Joshua Tree (Yucca brevifolia)*. Available: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=183565&inline.

CNDDB. 2020. RareFind 5. Records search covering the United States Geological Survey 7.5-minute series topographic maps: Little Buttes, Tylerhorse Canyon, Willow Springs, Soledad Mountain, Rosamond, Lancaster West, Del Sur, Lake Hughes, Fairmont Butte, California.

ICF. 2021. *Biological Technical Report, Estrella Solar Project, Los Angeles County, California*.

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA. 1300 pp. Available: https://vegetation.cnps.org/.

Spencer, W. D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Wildlife, and Federal Highways Administration.

## 4.2.5 3.5 Cultural Resources

BCR Consulting LLC. 2020. *Cultural Resources Assessment, Estrella Solar Project, Unincorporated Los Angeles County, California.*

## 4.2.6 3.7 Geology and Soils

BCR Consulting LLC. 2020. *Cultural Resources Assessment, Estrella Solar Project, Unincorporated Los Angeles County, California.*

California Geological Survey. 2020. *Earthquake Zones of Required Investigation Online Interactive Map*. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/.

United States Geological Survey. 2005. *Seismic Hazard Zone Report for the Little Buttes 7.5-Minute Quadrangle, Los Angeles County, California*. Available at: https://gmw.conservation.ca.gov/shp/EZRIM/Reports/SHZR/SHZR_089_Little_Buttes.pdf.

_____. 2016. *Aquifer-System Compaction: Analyses and Simulations-the Holly Site, Edwards Air Force Base, Antelope Valley, California By Michelle Sneed and Devin L. Galloway U.S. Geological Survey Water-Resources Investigations Report 00-4015*. Available at: https://pubs.usgs.gov/wri/2000/wri004015/pdf/wrir004015.pdf.

## 4.2.7 3.8 Greenhouse Gas Emissions

Antelope Valley Air Quality Management District. 2016. *California Environmental Quality Act and Federal Conformity Guidelines*. August 2016. Available at: https://avaqmd.ca.gov/files/e5b34d385/AV%20CEQA%20Guides%202016.pdf.

California Air Resources Board. 2018. *AB 32 Scoping Plan (website)*. Available at: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

California State Senate. 2018. *SB 100, 100% Clean Energy (website)*. Available at: https://focus.senate.ca.gov/sb100.

Trinity Consultants. 2017. *California Emissions Estimator Model User's Guide* Version 2016.3.2. November.

## 4.2.8 3.9 Hazards and Hazardous Materials

California Department of Forestry and Fire Protection. 2007. *Los Angeles County Fire Hazard Severity Zones in SRA*. Available at: https://osfm.fire.ca.gov/media/6705/fhszs_map19.pdf.

_____. 2007a. *Los Angeles County Very High Fire Hazard Severity Zones in LRA*. Available at: https://osfm.fire.ca.gov/media/7280/losangelescounty.pdf.

California Department of Toxic Substances Control. 2020. *Solar Panel FAQs prepared by the DTSC Regulatory Assistance Office*. Available at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/05/SolarPanelFAQs.pdf.

County of Los Angeles. 2012. *Disaster Routes with Road Districts, North Los Angeles County*. Available at: https://dpw.lacounty.gov/dsg/DisasterRoutes/map/disaster_rdm-North.pdf.

Kern County. 2021. *Draft Environmental Impact Report, Raceway 2.0 Solar Project*. Available at: https://kernplanning.com/environmental-doc/raceway_2-0_solar_project/.

## 4.2.9 3.10 Hydrology and Water Quality

Antelope Valley Watermaster. 2019. *Final Antelope Valley Watermaster 2018 Annual Report*. Available at: https://avwatermaster.net/wp-content/uploads/2019/07/190729-2018-Annual-Report-FINAL-Reduced.pdf.

Federal Emergency Management Agency. 2008. *FIRM Panel 0637C0150F*. Available at: https://msc.fema.gov/portal/home.

California Water Boards. 2020. *National Pollutant Discharge Elimination System (NPDES) – Wastewater, website*. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/.

Lahontan Regional Water Quality Control Board. 2019. Water Quality Control Plan for the Lahontan Region Chapter 2, Table 2-2. Beneficial Uses for Ground Waters of the Lahontan Region. Available at: https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/ch2_bu.pdf.

## 4.2.10 3.11 Land Use and Planning

Kern County. 2020. *Interactive GIS Map*. Available at https://maps.kerncounty.com/H5/index.html?viewer=KCPublic.

Los Angeles County. 2015a. *Antelope Valley Area Plan, Table L-1: Land Use Legend*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_draft-20150601.pdf.

Los Angeles County Department of Regional Planning. 2015. *Antelope Valley Area Plan, Town and Country, Map 2-1*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_map2-1-west-20150601.pdf.

_____. 2020. *Z-Net Interactive Map*. Available at: https://lacounty.maps.arcgis.com/apps/webappviewer/index.html?id=7700eea9d54d46b18efb615f86cba25c.

## 4.2.11 3.12 Mineral Resources

California Department of Conservation. 1983. *Division of Mines and Geology. Mineral Land Classification and Index to Detailed Zone and Sector Maps for the Saugus-Newhall and Palmdale P-C Regions (map)*. Available at ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_143/PartV/Plate_5-1.pdf.

_____. 2001. *Division of Oil, Gas, and Geothermal Resources, Oil, Gas, and Geothermal Fields in California (map)*. Available at: ftp://ftp.consrv.ca.gov/pub/oil/maps/Map_S-1.pdf.

_____. 2020. *Division of Oil, Gas, and Geothermal Resources, Well Finder (interactive map)*. Available at: https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.94276/37.12009/6.

Los Angeles County. 2020. *General Plan Update Program—Interactive Map (GP-NET)*. Available at http://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public.

Los Angeles County Department of Regional Planning. 2015. *Antelope Valley Area Plan, Town and Country, Mineral Resource Zones Map 4.4*. Available at: http://planning.lacounty.gov/assets/upl/project/tnc_map4-4-20150601.pdf.

## 4.2.12 3.13 Noise

California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. Final. CT-HWANP-RT-20-365.01.01. April 2020. Sacramento, CA.

Chen Ryan. 2020. Estrella Solar Project – Vehicle Miles Traveled (VMT) Analysis Technical Memorandum. November 12.

City-Data. 2021. Little Buttes Antique Airfield Airport (1CL1) in Lancaster, California. Available: http://www.city-data.com/airports/Little-Buttes-Antique-Airfield-Airport-Lancaster-California.html. Accessed: January 2021.

Federal Highway Administration (FHWA). 2004. FHWA Traffic Noise Model®, Version 2.5 Look-Up Tables User's Guide. Final. FHWA-HEP-05-008 / DOT-VNTSC-FHWA-0406. December 2004. Washington, DC. Prepared by U.S. Department of Transportation, Research and Special Programs Administration, John A. Volpe National Transportation Systems Center Acoustics Facility. Cambridge, MA.

_____. 2008. Roadway Construction Noise Model.

Kern County. 2020. Interactive GIS Map. Available at https://maps.kerncounty.com/H5/index.html?viewer=KCPublic.

_____. 2008. Willow Springs Specific Plan. April 1.

Los Angeles County. 1991. Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan. December 19. Revised December 1, 2004.

Los Angeles County Department of Regional Planning. 2015. Los Angeles County General Plan 2035 – October 2015, Chapter 11, Noise Element, p. 196. Available at http://planning.lacounty.gov/generalplan/generalplan.

## 4.2.13 3.15 Public Services

Los Angeles County Fire Department. 2020. *Los Angeles County Fire Department - Station 112 website*. Available at: https://locator.lacounty.gov/fire/Location/3035537/los-angeles-county-fire-department---station-112.

Los Angeles County Sheriff's Department. 2020. *Lancaster Sheriff's Station website*. Available at: https://www.cityoflancasterca.org/about-us/departments-services/public-safety/contract-services-emergency-response/l-a-county-sheriff-s-department.

## 4.2.14 3.17 Transportation

Chen Ryan. 2020a. *Estrella Solar Project – Vehicle Miles Traveled (VMT) Analysis Technical Memorandum*.

_____. 2020b. *Estrella Solar Project – Access Management Analysis*.

Los Angeles County Department of Public Works. 2012. *Disaster Routes with Road Districts, North Los Angeles County*. Available at: https://dpw.lacounty.gov/dsg/DisasterRoutes/map/disaster_rdm-North.pdf.

Los Angeles County Department of Regional Planning. 2015a. *Antelope Valley Area Plan, Town and Country, Map 3.1, Highway Plan.* Available at: Available at: http://planning.lacounty.gov/assets/upl/project/tnc_map3-1-20150601.pdf.

_____. 2015b. *Los Angeles County General Plan 2035 – October 2015*. Available at: http://planning.lacounty.gov/generalplan/generalplan.

## 4.2.15 3.18 Tribal Cultural Resources

BCR Consulting LLC. 2020. *Cultural Resources Assessment, Estrella Solar Project, Unincorporated Los Angeles County, California.*

## 4.2.16 3.19 Utilities and Service Systems

Antelope Valley Watermaster. 2017. *History*. Available at: https://avwatermaster.net/about-us/history/.

Los Angeles County Department of Public Works. 2020. *Construction and Demolition Debris Recycling and Reuse Program Website*. Available at: https://dpw.lacounty.gov/epd/cd/.

Los Angeles County Waterworks Districts. 2005. *LACo WWD No. 40 Regions 4 & 34 Map*. Available at: https://dpw.lacounty.gov/wwd/web/Documents/LACo_wwd_40_04_&_34index.pdf.

## 4.2.17 3.20 Wildfire

California Department of Forestry and Fire Protection*. 2007. Los Angeles County Fire Hazard Severity Zones in SRA*. Available at: https://osfm.fire.ca.gov/media/6705/fhszs_map19.pdf.

_____. 2007a. *Los Angeles County Very High Fire Hazard Severity Zones in LRA*. Available at: https://osfm.fire.ca.gov/media/7280/losangelescounty.pdf.

County of Los Angeles. 2012. *Disaster Routes with Road Districts, North Los Angeles County.* Available at: https://dpw.lacounty.gov/dsg/DisasterRoutes/map/disaster_rdm-North.pdf.

Federal Emergency Management Agency. 2008*. FIRM Panel 0637C0150F*. Available at: https://msc.fema.gov/portal/home.

Appendix A

# Air Quality/Greenhouse Gas/Health Risk Analysis

Appendix B
**Biological Technical Report**

Appendix C
**Cultural Resources Assessment**

Appendix D

**Estrella Phase I Environmental Site Assessment**

Appendix E

# Geotechnical Investigation Report

Appendix F

**Raceway 2.0 Phase I Environmental Site Assessment**

Appendix G
**Noise Analysis**

Appendix H

# Vehicle Miles Traveled Memorandum and Access Management Analysis

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